Final

5-Year Update
Environmental Assessment for
CV-22 Beddown

Hurlburt Field, Florida

February 2007

Report Documentation Page

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FINAL
FINDING OF NO SIGNIFICANT IMPACT
5-YEAR UPDATE
CV-22 BEDDOWN
HURLBURT FIELD, FL

Agencies: The United States Air Force (USAF) and the United States Navy (Navy).

Background: Pursuant to provisions of the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. §§ 4321-4370), Council on Environmental Quality (CEQ) regulations (40 C.F.R. §§ 1500-1508), Department of Navy procedures for Implementing NEPA (32 C.F.R. § 775), and Air Force Environmental Impact Analysis Process (EIAP) as promulgated in 32 C.F.R. § 989, and AFI 32-7086, the U.S. Air Force (USAF) and U.S. Navy (Navy) conducted a 5-year update assessment of the potential environmental consequences resulting from conducting initial operational test and evaluation (IOT&E), and beddown of the CV-22 Osprey at Hurlburt Field, Florida.

The purpose of the Proposed Action is to:

- Conduct IOT&E by testing the operation of the CV-22 in as realistic an operational environment as possible and practicable, to identify and resolve any deficiencies and to ensure the aircraft will function as designed in a Joint Service application for its intended use as a replacement for the current MH-53 helicopter, currently based at Hurlburt Field; and
- Beddown up to 27 CV-22 aircraft at Hurlburt Field between FY 2007 – FY 2017.

The Proposed Action is needed because, in order to meet USAF mission requirements, 16 SOW must be capable of providing support for the training requirements of special operations forces in preparation for passive and active combat defense countermeasures. The current MH-53 helicopter technology utilized by special operations forces at Hurlburt Field is nearing the end of its service life, and therefore requires upgrading. The CV-22 has been designated as its intended replacement. It has the ability to travel large distances at high speeds, at night, and under adverse weather conditions. The CV-22 provides increased operational capabilities over the MH-53 helicopter.

The Navy is required by law to conduct IOT&E before an aircraft can be added to the inventory. IOT&E determines the operational effectiveness and suitability of systems using production or production-representative articles with stabilized performance and operationally representative personnel. Tests are conducted under operational conditions and mission scenarios, including combat, that are as operationally realistic as possible and practical. IOT&E determines if operational requirements and critical operational issues (COI) have been satisfied and assesses system impacts to peacetime and combat operations. A dedicated phase of IOT&E is required for Acquisition Category (ACAT) I and II programs according to 10 U.S.C. §2399.

In this case, the Navy must be capable of testing a tilt-rotor, vertical takeoff and landing aircraft (V-22 Osprey) for Joint Service application. The Navy's requirements can be met by conducting IOT&E with three Osprey aircraft over a 6-month period at Hurlburt Field, where the aircraft is proposed for operational beddown, Nellis AFB, and Eglin AFB.

Scope of the Environmental Assessment: The EA, which is hereby incorporated by reference, assesses the environmental impacts associated with the beddown and IOT&E of the CV-22 Osprey.

The potential environmental effects associated with the Proposed Action and No Action Alternative were assessed for the following environmental resources: Hurlburt Field airspace; air quality; noise; coastal zone management; wastes and waste management; hazardous material management; stored fuel; biological resources; cultural resources land use; and environmental justice/socioeconomics. Cumulative effects resulting from the overlap of the Proposed Action with EAs for other planned activities and other reasonably foreseeable actions were also assessed.

Resources not assessed in the 5-Year Update EA for CV-22 Beddown and IOT&E at Hurlburt Field included geology; water resources; floodplains; transportation; and utilities. These resources were determined to have no or inconsequential impacts and were not considered in this EA. Further, aircraft operations utilizing military training routes (MTRs), the Low Altitude Tactical Navigation (LATN) route, and Eglin Air Force Base targets and ranges, are not assessed in this EA. The potential impacts of CV-22 operations in these areas are assessed in activity-specific NEPA documentation.

Proposed Action and No Action Alternative: The USAF and Navy propose to conduct IOT&E and beddown the CV-22 Osprey aircraft. Specifically, activities to be performed as part of the Proposed Action include the following:

- Conduct IOT&E of the CV-22 at Hurlburt Field, Eglin AFB, and Nellis AFB; and
- Beddown up to 27 CV-22 aircraft at Hurlburt Field between FY 2007 and FY 2017.

The beddown would be conducted over an 11-year period beginning in Fiscal Year (FY) 2007. When the CV-22 is fully deployed, AFSOC will have replaced its MH-53 helicopter fleet with the CV-22 aircraft. At full deployment, the CV-22 will operate at approximately 117% of the calendar year 1999 MH-53 operating rate.

Crisis response requires aircraft with extended range and speed capabilities and the ability to take off and land vertically. The CV-22 Osprey's vertical take off and landing capabilities, faster operating speeds, and its ability to travel greater distances than the current helicopter fleet make it more capable than the helicopters currently in service. The aircraft will have terrain-following and terrain-avoidance radar, extended-range fuel tanks, an integrated navigation system, and a reduced acoustic noise level. Because of these capabilities, the CV-22 Osprey would not only replace the MH-53's role in medium-lift maneuvers, but provide the Navy and USAF with enhanced operational capabilities.

Under the No Action Alternative, the Air Force would not go forward with the beddown or IOT&E of the CV-22 Osprey. Selection of the No Action Alternative would result in the continued use of the MH-53 helicopters by 16 SOW at Hurlburt Field. Navy IOT&E for Osprey aircraft would not be performed at Hurlburt Field.

Consequences of the Proposed Action: IOT&E and beddown activities associated with the Proposed Action would affect, but not significantly impact, the existing environment. Air emissions estimated for operational activities would not adversely affect regional air quality, human health or wildlife. A General Conformity determination pursuant to Clean Air Act section 176(c) would not be required because the proposed action's emissions would be below the applicable de minimis levels. Noise from the Proposed Action would be consistent with current, established operational constraints. With respect to Federal consistency with the Coastal Zone Management Act, the USAF and the Navy have determined that the Proposed Action is consistent to the maximum extent practicable with the Florida Coastal Management Program. The Florida State Clearinghouse was provided a Draft EA for distribution to agencies enforcing the 23 statutes established to protect state coastlines, and the USAF and Navy anticipate receipt of a state clearance letter acknowledging federal consistency. Hazardous materials and wastes would be managed in accordance with applicable regulations and installation guidelines. Biological resource effects would not be significant; the USAF and the Navy have determined that the Proposed Action would have no effect on threatened or endangered species. The greatest hazard to wildlife as a result of aircraft activities is bird-aircraft strikes. The Bird Aircraft Strike Hazard (BASH) Plan would be utilized to minimize aircraft-bird strikes. Cultural resources will not be adversely affected by the Proposed Action. Land use will not be adversely impacted by the Proposed Action.

The Proposed Action would not result in any disproportionately high or adverse human health or environmental impacts on minority or low-income populations. Noise levels during training missions are projected to remain essentially the same as current conditions.

Implementation of the Proposed Action would meet the USAF and Navy's purpose and need for action, and would not result in direct, indirect, or cumulative impacts to human health or the environment. Under the Proposed Action, in addition to on-going and planned projects, there would be no cumulative environmental impacts. There are no adverse, unavoidable impacts associated with the implementation of the Proposed Action.

FINDING OF NO SIGNIFICANT IMPACT: Based upon my review of the facts and analyses contained in the attached 5-Year Update Environmental Assessment, I conclude that implementation of the Proposed Action will not have a significant environmental impact, either by itself or cumulatively with other projects at Hurlburt Field. Accordingly, the requirements of NEPA, the regulations promulgated by the Council on Environmental Quality and 32 CFR §§ 775 and 989 are fulfilled and an Environmental Impact Statement is not required. A Notice of Availability for public review was published in the local newspaper on November 19, 20, and 21, 2006. The signing of this Finding of No Significant Impact (FONSI) completes the Navy's and Air Force's environmental impact analysis process.

The 5-year Update prepared for this action is on file and copies may be obtained from Mr. Carl T. Hoffman, HQ AFSOC/A7PP, 427 Cody Ave, Suite 303, Hurlburt Field, FL 32544-5434, Carl.Hoffman@Hurlburt.af.mil, (850)-884-5984.

United States Air Force

Date 2-7 MAR 07

Steven E. Hoarn, Colonel, USAF
Director, Installations and Mission Support

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United States Air Force

_____Date_____
Steven E. Hoarn, Colonel, USAF
Director, Installations and Mission Support

Section 1.0 Purpose and Need for Action

Section 2.0 Description of Alternatives including the Proposed Action

Section 3.0 Affected Environment

Section 4.0 Environmental Consequences

List of Tables

List of Figures

List of Appendices

SECTION 1.0
PURPOSE AND NEED FOR ACTION

1.1 Purpose and Need of the Proposed Action

The United States Air Force (USAF) and the United States Navy (Navy) have prepared this 5-Year Update Environmental Assessment (EA) to assess the potential environmental effects resulting from Initial Operational Test and Evaluation (IOT&E), and beddown of the CV-22 (Figure 1-1) at Hurlburt Field, Florida. The aircraft would be assigned to the 16 Special Operations Wing (16th SOW).

In September, 2001, the USAF prepared an EA and subsequent Finding of No Significant Impact (FONSI) for CV-22 Beddown at Hurlburt Field. The decision to beddown and conduct post beddown operations has already been made. This 5-Year Update EA is only intended to update and supplement the information provided in the September 2001 EA to reflect the current projection of CV-22 activities at Hurlburt Field. It also adds and analyzes the proposal to conduct temporary IOT&E operations at Hurlburt Field, Eglin AFB, and Nellis AFB, which was not part of the original EA.

In October, 2005, the USAF prepared an EA and subsequent FONSI for the General Plan Environmental Assessment for Hurlburt Field (USAF, 2005). The General Plan for Hurlburt Field is a summary of the overall Base Comprehensive Plan. This 2005 EA determined that implementation of the Hurlburt Field General Plan would not result in any significant adverse impacts to the natural, cultural, or socioeconomic environments. The General Plan EA may also be used as a tiering document for other Hurlburt Field projects requiring National Environmental Policy Act (NEPA) documentation that were not specifically covered in the General Plan EA, in accordance with 40 Code of Federal Regulations (CFR) 1508.28. The findings of the General Plan EA have been integrated into this 5-Year Update EA, as appropriate.

This EA was conducted in accordance with NEPA of 1969 [42 United States Code (USC) 4321 et seq.], the Council of Environmental Quality (CEQ) Regulations (40 CFR 1500-1508), Air Force Instructions: Environmental Impact Analysis Process (32 CFR 989), and Department of Navy Procedures for Implementing NEPA (32 CFR 775). If this EA concludes that there is no potential for significant adverse impacts, a FONSI is issued. If this EA concludes that there is a potential for significant adverse impacts, an Environmental Impact Statement (EIS) would be required.

Other environmental regulatory requirements relevant to the Proposed Action and alternatives also are identified in this EA. Regulatory requirements under the following programs, among others, will be assessed: Noise Control Act of 1972; Clean Air Act (CAA); Clean Water Act (CWA); National Historic Preservation Act; Endangered Species Act of 1973; Coastal Zone Management Act; Resource Conservation and Recovery Act (RCRA); Toxic Substances Control Act (TSCA) of 1970; and Occupational Safety and Health Act. Requirements also include compliance with Executive Order (EO) 11988, Floodplain Management; EO 11990, Protection of Wetlands; and EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.

The mission of the 16th SOW, part of the Air Force Special Operations Command (AFSOC), is to organize, train, equip, and educate Air Force special operations forces for worldwide deployment. Beddown of the CV-22 Osprey at Hurlburt Field is part of an Air Force initiative to field newer, more capable aircraft and retire older, existing aircraft.

The Navy's V-22 Osprey Program is responsible for developing, testing, procuring and fielding a tiltrotor, vertical takeoff and landing aircraft for Joint Service application. The V-22 program is designed to provide an aircraft to meet United States Marine Corps' (USMC) amphibious/vertical assault mission, the Navy's Fleet combat support and Combat Search and Rescue (CSAR) mission, and the United States Special Operations Command (USSOCOM) special operations mission. There are currently three variants of the V-22: the MV-22 is the USMC version, the HV-22 is the Navy's version, and the CV-22 is the USAF/USSOCOM version.

Special Operations Forces global missions span the spectrum from peacekeeping to warfighting. Activities include unconventional warfare, direct action, special reconnaissance, counter terrorism, foreign internal defense, personnel recovery, and information operations. AFSOC, as the air component of USSOCOM, has a requirement to quickly insert and/or extract special operations forces and American citizens behind enemy lines or contested airspace. These missions require an aircraft with the ability to fly fast, travel great distances, defend itself, and take off or land vertically. The Air Force intends to utilize the CV-22 (Figure 1-1) to meet these operational requirements.

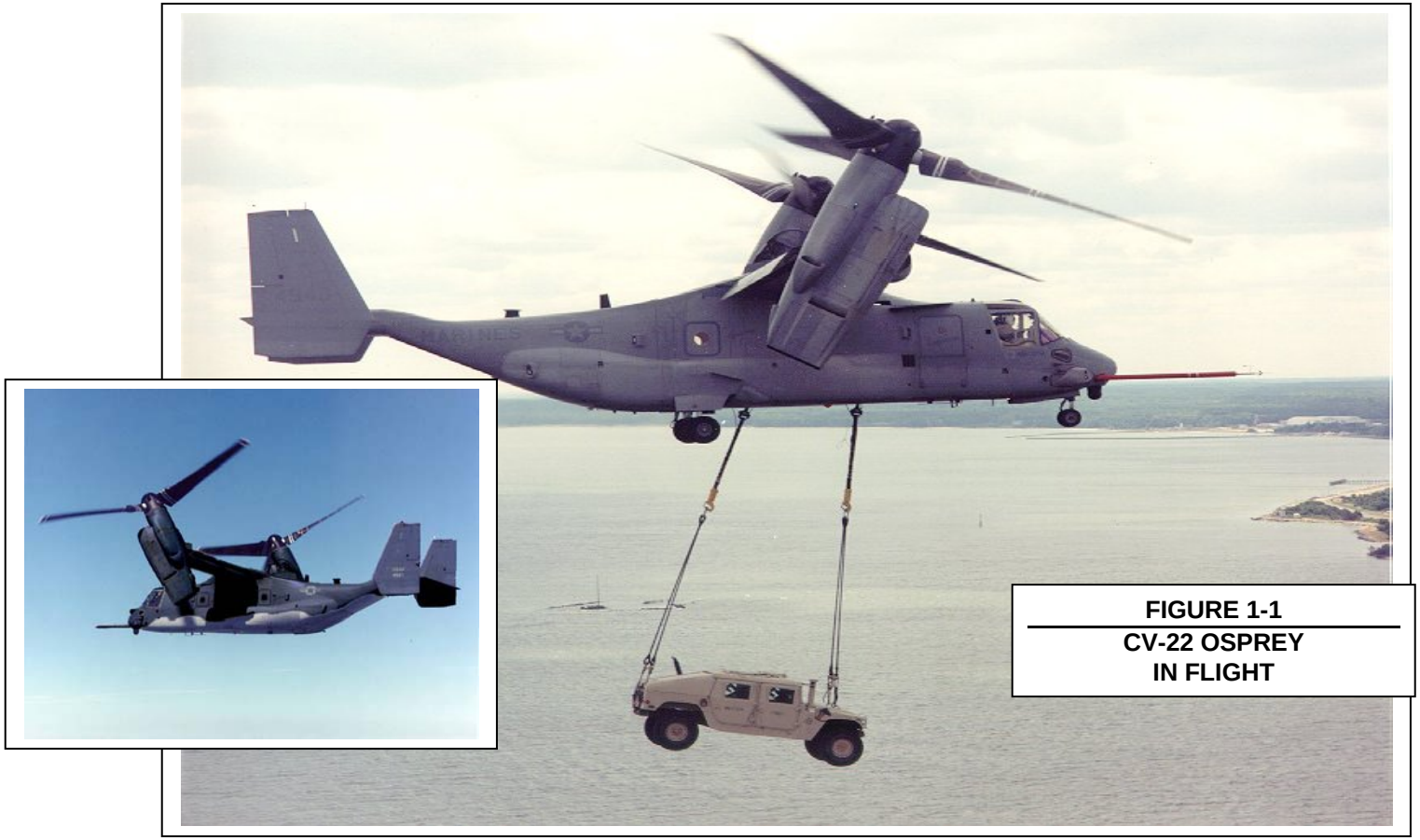


FIGURE 1-1
CV-22 OSPREY
IN FLIGHT

The V-22 tilt-rotor aircraft is a joint multi-mission vertical-lift aircraft that will provide the USAF/USSOCOM with a multi-engine, dual-piloted, self-deployable, medium lift, vertical takeoff and landing aircraft to conduct combat, combat support, combat service support, and special operations missions worldwide. The V-22 tilt-rotor, referred to as the Osprey, entered the Department of Defense (DoD) inventory in May 1999 when the first MV-22 was delivered to the U.S. Marine Corps. The aircraft will be fully capable of operations in adverse weather; day or night; in climates from arctic to tropical; and in a variety of conventional, unconventional and contingency combat situations, including nuclear, biological and chemical warfare (USAF, 2000a).

The CV-22 Osprey aircraft will use terrain-following terrain-avoidance radar, a forward-looking infrared receiver, precision navigation and state-of-the-art active and passive defensive countermeasures to accomplish special operations force (SOF) missions. These features will allow the aircraft to operate at night in adverse weather conditions. The aircraft will operate from air-capable ships, as well as shore sites ranging from main bases to forward operating locations. An in-flight refueling capability will extend its combat mission range when required, and the aircraft would be self-supporting to the maximum practical extent (USAF, 2000a).

The CV-22 Osprey is designed to transport up to 18 combat-equipped troops or approximately 10,000 pounds of cargo, dual-hook external loads up to 10,000 pounds. The CV-22 operates at cruise speeds in excess of 230 knots, and has a combat unrefueled mission radius of 500 nautical miles (USAF, 2000a).

1.1.1 Hurlburt Field

Hurlburt Field is located on 6,634 acres in Okaloosa County within the Florida Panhandle. The installation is approximately 35 miles east of Pensacola and is bordered by the city of Mary Ester and Santa Rosa Sound (Figure 1-2). Primary highway access to Hurlburt Field is via U.S. Highway 98. Hurlburt Field was formerly known as Eglin Auxiliary Field 9, and the installation retains close organizational and operational ties to Eglin AFB. A Host Tenant Agreement exists between Air Armament Center on Eglin AFB and 16th SOW, which gives operational control of Hurlburt Field to the 16th SOW (USAF, 2005).

Hurlburt Field is divided into a western and eastern section by the runway and associated airfield. Runway 18/36 is 9,600 feet long and 150 feet wide. Hurlburt Field also has two helicopter landing pads, Charlie (CP) and Delta (DP), both 200 feet long and 200 feet wide. The average field elevation is 38 feet above MSL,

and the current magnetic declination is 1.3 degrees west (DoD, 2000 and USAF, 2005).

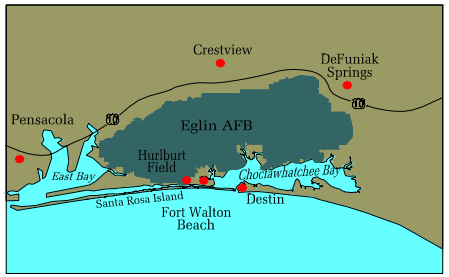
The 16th SOW comes under Headquarters (HQ) AFSOC, located at Hurlburt Field. The 16th SOW includes 4 Special Operations Groups: 16th MDG, 16th MSG, 16th MXG, and 16th OG. Additional details and analysis of SOS operations are provided in the October 2005 Hurlburt Field General Plan EA (USAF, 2005).

1.1.2 Hurlburt Field Flying Missions

The training of aircrew members in new weapon systems and tactics requires the use of specially designated airspace in order to achieve and maintain combat-ready status. Training and IOT&E for the CV-22 aircraft would occur in airspace beyond the bounds of Hurlburt Field. Aircraft conduct training activities and IOT&E at the Ranges, Restricted Areas and Target Areas at Eglin AFB. Hurlburt Field flying missions are scheduled through Eglin AFB. The Air Armament Center (AAC) has responsibility for the Eglin Range Complex and for all of its users which include DoD, other government agencies, foreign countries, and private companies.

AAC is responsible for the necessary environmental analyses and NEPA documentation for range operations. Eglin NEPA documentation is extensive and dynamic. Current range operations have been documented in numerous EAs. Subsequent FONSI documentation has been completed for the following: Test Area (TA) B-70; TA C-52 Complex; Interstitial Area; Cape San Blas; Eglin Gulf Test & Training Range; TA C-80; Overland Air Operations; TA B-12; TA C-72; Test Area Maintenance; TA B-75; TA B-71/82; TA C-64; TA C-62; TA C-74; Electromagnetic Radiation; Air-to-Ground Gunnery; Riverine/Estuarine; and Range Roads.

The Environmental Impact Analysis Process (EIAP) at Eglin AFB is in the scoping stage for an EIS to address impacts associated with mission changes resulting from the DoD Base Realignment and Closure (BRAC) initiatives. Aircraft operations, including CV-22 operations, will be evaluated as part of that EIS. The EIS process includes formal public scoping and development of alternatives, a detailed impact assessment, and highly detailed mitigation measures (40 CFR 1502).



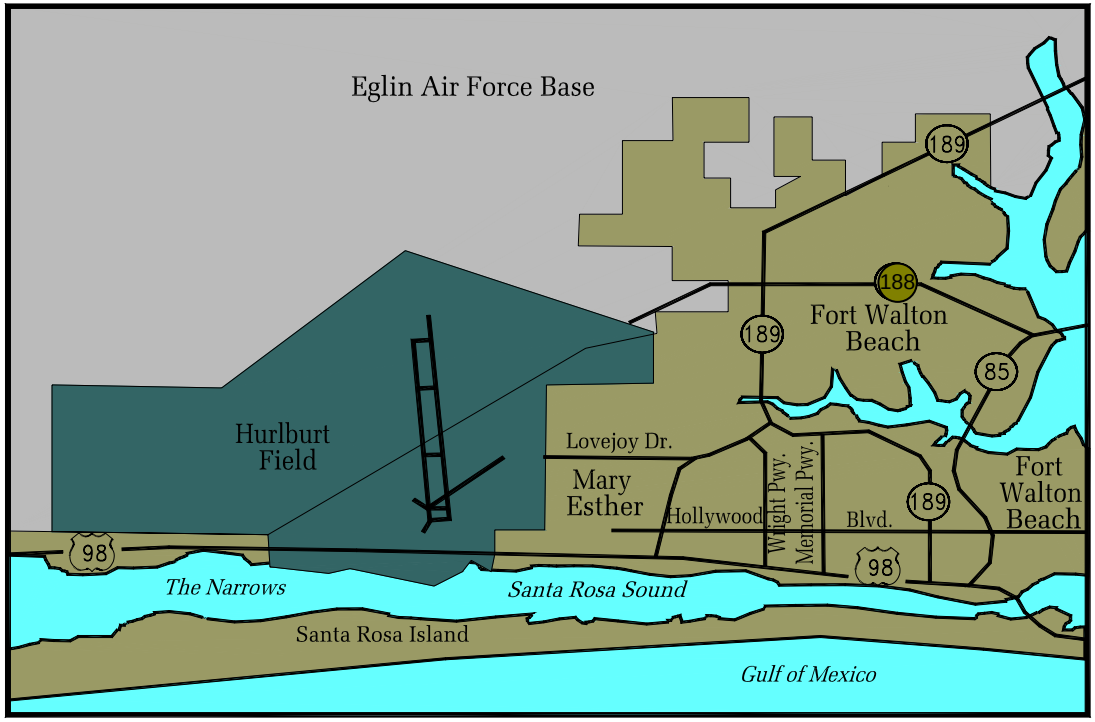


FIGURE 1–2

LOCATION MAP

HURLBURT FIELD, FLORIDA

In addition, Hurlburt Special Forces operations utilize the Low Altitude Tactical Navigation (LATN) route, several Military Training Routes (MTRs), and Instrument Routes (IRs). Environmental impacts are assessed for each of these operational areas individually; the individual assessments include impacts resulting from all operating aircraft, including the CV-22. Each of the following activity-specific EAs recommend a FONSI, since human health and the natural environment will not be significantly impacted as a result of the respective Proposed Action:

- Environmental Assessment – Modification of Existing Slow Speed Low Altitude Military Training Route SR-101 (USAF, 2006a).
- Environmental Assessment – Modification of Existing Slow Speed Low Altitude Military Training Route SR-103 (USAF, 2006c).
- Environmental Assessment – Alteration of Existing Instrument Flight Rule Military Training Routes IR-057 and IR-059 (USAF, 2006d).
- Environmental Assessment – Modification of Existing Slow Speed Low Altitude Military Training Route SR-119 (USAF, 2006e).
- Environmental Assessment – Proposed Establishment of Instrument Route IR-1090 (USAF, 2006f).
- Environmental Assessment – Low Altitude Training Navigation Area (LATN) (USAF, 2006g). The Final EA will include an extensive evaluation of the cumulative effects of all of the EAs in this list.

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The Proposed Action is needed because, in order to meet USAF mission requirements, 16th SOW must be capable of providing support for the training requirements of special operations forces in preparation for passive and active combat defense countermeasures. The current MH-53 helicopter technology utilized by special operations forces at Hurlburt Field is nearing the end of its service life, and therefore requires upgrading. The CV-22 has been designated

as its intended replacement. It has the ability to travel large distances at high speeds, at night, and under adverse weather conditions. The CV-22 provides increased operational capabilities over the MH-53 helicopter.

The Navy is required by law to conduct IOT&E before an aircraft can be added to the inventory. IOT&E determines the operational effectiveness and suitability of systems using production or production-representative articles with stabilized performance and operationally representative personnel. Tests are conducted under operational conditions and mission scenarios, including combat, that are as operationally realistic as possible and practical. IOT&E determines if operational requirements and critical operational issues (COI) have been satisfied and assesses system impacts to peacetime and combat operations. A dedicated phase of IOT&E is required for Acquisition Category (ACAT) I and II programs according to 10 U.S.C. §2399.

In this case, the Navy must be capable of testing a tilt-rotor, vertical takeoff and landing aircraft (V-22 Osprey) for Joint Service application. The Navy's requirements can be met by conducting IOT&E with three Osprey aircraft over a 6-month period at Hurlburt Field, where the aircraft is proposed for operational beddown, Eglin AFB and Nellis AFB.

In 2001, the USAF documented the environmental impacts associated with beddown of CV-22 aircraft at Hurlburt Field in an EA; a subsequent FONSI was issued. This EA is an update to the 2001 EA. In the 2001 EA, Hurlburt Field was determined to be the preferred location for CV-22 beddown, since training efficiency of special operations forces is maximized due to the proximity of Hurlburt Field to other special operations aircraft. Hurlburt Field's location facilitates multi-ship training and integration. Additionally, Hurlburt Field has access to the following:

- nearby gunnery ranges
- ocean drop training areas
- flight training routes in varied terrain
- nearby electronic countermeasures (ECM) ranges

The USAF needs to retire existing Special Operations Command MH-53 helicopters, field the CV-22 Osprey, and train its personnel in the deployment and operation of the CV-22. The training exercises and readiness activities to be conducted by AFSOC with the CV-22 would facilitate continued realistic war-time training on aircraft designed for air combat support, search and rescue, and

multi-service operations for deployment in support of special operation activities worldwide.

1.3 Decisions to be Made

The USAF and Navy must decide between the following options: (a) conduct IOT&E of the CV-22 aircraft, and beddown up to 27 CV-22s at Hurlburt Field to replace the retiring MH-53, or (b) no action. If the CV-22 beddown option is selected, then IOT&E would be performed and the MH-53s would be retired. If the No Action Alternative is selected, the MH-53s would remain in active status at Hurlburt Field.

1.4 Scope of the Environmental Assessment

NEPA, CEQ regulations, USAF and Navy procedures for implementing NEPA specify that an EA should address only those issues and resource areas subject to impacts. In addition, the level of analysis should be commensurate with the anticipated level of environmental impact.

The potential environmental effects of CV-22 IOT&E activities and operations that extend beyond Hurlburt Field (i.e., Nellis AFB, Eglin Range operations, MTR and LATN operations, etc.) are evaluated in operation-specific NEPA documentation. (see Section 1.5 Related Environmental Documents) Operations beyond Hurlburt Field include various aircraft: MH-53, MH-60, C-130, CA-212, A-10 and CV-22. However, due to mission changes required by the 2005 Base Realignment And Closure (BRAC) decision, the airspace and training route usage may change and will be analyzed in the Environmental Impact Statement currently being drafted for Eglin AFB.

The potential environmental effects of the beddown of the CV-22 aircraft generated by these activities could affect Hurlburt Field airspace, air quality, noise, coastal zone management, hazardous materials and wastes, biological resources, cultural resources, land use, and environmental justice/socioeconomics. Detailed descriptions of the affected environment are presented in Section 3.0, *Affected Environment* and the potential environmental consequences relative to these resources are presented in 4.0, *Environmental Consequences*. Other resource areas and conditions were examined during preparation of this EA and it was determined that the Proposed Action would either have no or inconsequential impact to the following resource areas: geology, water resources, floodplains, transportation (ground), and utilities. The reasons for not addressing these resources are presented in the following paragraphs and are not further discussed in this EA.

Geology. The Proposed Action does not require changes to land surfaces, therefore no potential impacts would result from the Proposed Action.

Water Resources. The Proposed Action does not affect surface or subsurface waters, therefore no potential impacts would result from the Proposed Action.

Floodplains. Executive Order 11988, Floodplains Management, directs government agencies to avoid adverse effects and incompatible development in floodplains. If construction is unavoidable, then agencies must ensure the action conforms to applicable floodplain protection standards, and that accepted flood-proofing and other flood protection measures are applied to the construction.

Regions of the 100-year floodplain are extensive on Hurlburt Field. Most of the northwest and much of the northeast portions of the base occur within the 100-year floodplain. Scattered, isolated floodplain pockets occur east and west of the airfield, and a floodplain/storm surge fringe exists where the base borders Santa Rosa Sound (USAF, 1996). The Proposed Action does not include construction activities; therefore floodplains will not be impacted.

Transportation. There are no roadway modifications or upgrades proposed in support of CV-22 beddown. The number of operational personnel required to support CV-22 beddown would not change from the existing conditions. Modification of the existing Training Device Support Facility, Building 91029, has already been performed to accommodate CV-22 simulator and training activities.

Utilities. Based on equipment inventory to be contained in the facilities previously modified to support CV-22 beddown, and the projected usage and maintenance requirements, no increase in utility consumption at Hurlburt Field is anticipated as a result of the Proposed Action. Furthermore, as utility services currently exist at the buildings that will be used for simulator training and hangar facilities, no new routing of utility services into or out of the training and hangar facilities is projected. For these reasons, impacts to utility systems are not expected and are not analyzed in further detail.

1.5 RELATED ENVIRONMENTAL DOCUMENTS

In accordance with CEQ regulations for implementing NEPA, material relevant to a proposed action may be incorporated by reference with the intent of reducing the size of the document. Several documents address potential environmental impacts that are applicable to CV-22 activities performed by the USAF and the Navy. Accordingly, the following paragraphs provide brief descriptions of the documents incorporated by reference in this EA:

- (USAF, 2007) Categorical Exclusion (CATEX) for the IOT&E of the CV-22 at Nellis AFB, Nevada. January 18, 2007. This CATEX covers portions of IOT&E that will be completed at Nellis AFB. Testing will include infiltration/exfiltration/resupply missions, single and multi-aircraft operations, cargo and personnel drops, aerial refueling, aircraft survivability, and self-deployment. An Air Force Environmental Impact Review Process (AF813) was submitted to the Nellis AFB Environmental Review Board and it was determined that this action could qualify as a Categorical Exclusion (CATEX) under AF CATEX A2.3.7, which states "Continuation or resumption of preexisting actions, where there is no substantial change in existing conditions or existing land uses and where the actions were originally evaluated in accordance with applicable law and regulations, and surrounding circumstances have not changed."

- **(USAF, 2006a) Environmental Assessment – Modification of Existing Slow Speed Low Altitude Military Training Route SR-101. Final Draft, May 2006.** This EA evaluated the impacts associated with operating C-130 and CV-22 aircraft on an existing training route which transverses portions of Alabama, Florida, Georgia, North Carolina, and Tennessee. The purpose of the Proposed Action of modifications to SR-101 is to provide airspace for pilots and aircrew to hone skills, and permit the 16th SOW to operate and train pilots on 2 different types of aircraft: the C-130 and the CV-22. The Proposed Action is needed to facilitate continued realistic war-time training on the aircraft and enhance the 16th SOW's ability to provide realistic training of military personnel on aircraft designed for air combat support, search and rescue, and multi-service operations. The same type of testing and aircraft (CV-22) that was discussed in this EA will be used for IOT&E activities. The conclusion of this EA was to recommend a FONSI.

- **(USAF, 2006c) Environmental Assessment – Modification of Existing Slow Speed Low Altitude Military Training Route SR-103. Final Draft, May 2006.** This EA evaluated the impacts associated with operating C-130, MH-53, A-10 and CV-22 aircraft on an existing training route which transverses portions of Alabama, Florida, and Georgia. The purpose of the Proposed Action of modifications to SR-103 is to allow pilots and aircrew to hone skills, as well as permit the 16th SOW to operate and train pilots on 5 different types of aircraft: the C-130, MH-53, A-10, CA- 212, and CV-22. The Proposed Action is needed to facilitate continued realistic war-time training on the aircraft and enhance the 16th SOW's ability to provide realistic training of military personnel on aircraft designed for air combat support, search and rescue, and multi-service operations. The same type

of testing and aircraft (CV-22) that was discussed in this EA will be used for IOT&E activities. The conclusion of this EA was to recommend a FONSI.

- **(USAF, 2006d) Environmental Assessment – Alteration of Existing Instrument Flight Rule Military Training Routes IR-057 and IR-059. Final Draft, May 2006.** This EA evaluated the impacts associated with operating C-130, MH-53, A-10, CV-22 and CA-121 aircraft on existing training routes which transverse portions of Alabama, Florida, and Georgia. The purpose of the Proposed Action of modifications to IR-057 and IR-059 is to provide airspace for pilots and aircrew to hone skills, and permit the 16th SOW to operate and train pilots on 5 different types of aircraft: the C-130, MH-53, A-10, CA-212, and CV-22. The Proposed Action is needed to facilitate continued realistic war-time training on the aircraft and enhance the 16th SOW's ability to provide realistic training of military personnel on aircraft designed for air combat support, search and rescue, and multi-service operations. The same type of testing and aircraft (CV-22) that was discussed in this EA will be used for IOT&E activities. The conclusion of this EA was to recommend a FONSI.

- **(USAF, 2006e) Environmental Assessment – Modification of Existing Slow Speed Low Altitude Military Training Route SR-119. Final Draft, May 2006.** This EA evaluated the impacts associated with operating C-130, A-10, CV-22 and CA-212 aircraft on an existing training route which transverses portions of Alabama, Florida, Georgia, North Carolina, and Tennessee. The purpose of the Proposed Action of modifications to SR-119 is to provide airspace for pilots and aircrew to hone skills, and permit the 16th SOW to operate and train pilots on 4 different types of aircraft: the C-130, A-10, CV-22, and the CA-212. The Proposed Action is needed to facilitate continued realistic war-time training on the aircraft and enhance the 16th SOW's ability to provide realistic training of military personnel on aircraft designed for air combat support, search and rescue, and multi-service operations. The same type of testing and aircraft (CV-22) that was discussed in this EA will be used for IOT&E activities. The conclusion of this EA was to recommend a FONSI.

- **(USAF, 2006f) Environmental Assessment – Proposed Establishment of Instrument Route IR-1090. April 2006**. This EA evaluated the impacts associated with operating MC-130(E) Combat Talon, MC-130(H) Combat Talon II, MH-53 and CV-22 (CV-22 operations to commence 2007) on a new training route in the Southeastern United States. The purpose of the Proposed Action is to provide enhanced training for 16th SOW aircrews by permitting low-level operations in mountainous terrain at

times when weather conditions do not permit operations under visual flight rules (VFR). This airspace will provide realistic Instrument Meteorological Conditions (IMC) training in terrain following (TF) operations in mountainous regions and will be flown when weather conditions are unfavorable for using established Slow Routes (SRs). The Proposed Action is needed to ensure that military pilots and aircrews are able to receive comprehensive and realistic tactical flight training in an airspace environment which is as safe as possible. This specific need stems from the larger need to assure the continued fighting efficiency and effectiveness of the U.S. and allied air forces by providing airspace that allows these forces to train to the highest standards established by the Department of Defense. The same type of testing and aircraft (CV-22) that was discussed in this EA will be used for IOT&E activities. The conclusion of this EA was to recommend a FONSI.

- **(USAF, 2006g) Environmental Assessment – Low Altitude Training Navigation Area (LATN). Final Draft, June 2006**. This EA evaluated the impacts associated with operating C-130, MH-53, MH-60, A-10, CV-22 and CA-212 aircraft on an existing training route which transverses portions of Alabama, Georgia, North Carolina, South Carolina, and Tennessee. The purpose of the Proposed Action of the modification to the LATN is to provide airspace for pilots and aircrew to hone skills, and permit the 16th SOW to operate and train pilots on 6 different types of aircraft: the C-130, MH-53, MH- 60, A-10, CV-22, and the CA-212. The Proposed Action is needed to facilitate continued realistic war-time training on the aircraft and enhance the 16th SOW's ability to provide realistic training of military personnel on aircraft designed for air combat support, search and rescue, and multi-service operations. The same type of testing and aircraft (CV-22) that was discussed in this EA will be used for IOT&E activities. The Final EA will provide an extensive evaluation of the cumulative effects of the various training route EAs, including the CV-22 operations (Personal communication, Mr. Don Fitch (AAC/JAV), 15 June 2006).

- **(USAF, 2005) General Plan Environmental Assessment Hurlburt Field, Hurlburt Field, Florida**. **October 2005**. This EA evaluated the impacts with implementing the Hurlburt Field General Plan. The purpose of the Proposed Action is to seek funding and construct the necessary Capital Improvement Plan (CIP) projects. The Proposed Action is needed because it is essential that Hurlburt have an up-do-date and environmentally sound and documented General Plan reflecting known and projected future facility and infrastructure requirements. These requirements are driven both by evolving mission changes and the need

to improve and maintain facilities supporting the existing mission requirements at Hurlburt. This EA resulted in a FONSI.

- **(USAF, 2001a) Environmental Assessment for CV-22 Beddown, Hurlburt Field, Florida. September 2001**. This EA evaluated the impacts with replacing the MH-53 inventory with up to 28 CV-22 aircraft during the period of Fiscal Year 2004 through FY 2012. The purpose of the Proposed Action is to beddown and operate up to 28 CV-22 Osprey aircraft at Hurlburt Field, FL. The Proposed action would include the retirement of the existing MH-53s, construction of new flight simulator building, demolition of existing building, and readiness operations. The types of training and readiness operations include but are not limited to, low altitude tactical navigation, detection avoidance, water operations, terrain following, gunnery and combined arms exercises, and night vision goggle exercises. The Proposed Action is needed because AFSOC, located at Hurlburt Field, is responsible for organizing, training, and equipping USAF special operations forces and has an urgent operational requirement to prepare for the arrival of the CV-22. The MH-60 and MH-53 helicopters are nearing the end of their service lives. With the CV-22's ability to travel long distances at high speeds, at night, and under adverse conditions, it would provide a greatly needed increase in our operational capabilities. This EA resulted in a FONSI.

- **(USAF, 2001b) Integrated Natural Resources Management Plan and Environmental Assessment. Hurlburt Field, Florida. October 2001**. This EA evaluated the impacts associated with implementation of various Operational Component Plans for natural resource management projects, and served as a reference for information about the Hurlburt Field affected environment. The purpose of the Proposed Action is to serve as a detailed road map for the stewardship of all natural resource assets found on Hurlburt Field, Florida as required by the Sikes Act Improvement Amendments of 1997. The Proposed Action is needed to implement natural resource management actions that preserve and enhance the diverse ecosystems existing on Hurlburt Field, based on the responsibility of the Air Force to sustainably manage lands entrusted to it. Sustainable management of natural resources ensures continued mission support and preservation of the land and waters of Hurlburt Field for the overall good of the American people. Development of the INRMP also fulfills the requirement to coordinate natural resources management with the U.S. Fish and Wildlife Service and with the Florida Fish and Wildlife Conservation Commission. This EA resulted in a FONSI.

SECTION 2.0
DESCRIPTION OF ALTERNATIVES INCLUDING THE PROPOSED ACTION

In 2001, an EA was prepared for beddown of up to 28 CV-22 aircraft at Hurlburt Field from the period FY06 to FY12 (USAF, 2001a); the 2001 EA determined that no significant impacts would result from that Proposed Action and a FONSI was issued. Since 2001, the CV-22 delivery schedule has been modified. Therefore, the intent of this 5-Year Update EA is to reassess potential environmental impacts associated with the current plans for assignment of up to 27 CV-22 aircraft during the period FY07 to FY17 and to add analysis of the proposed IOT&E of the CV-22, which must be accomplished before beddown can occur.

2.1 DESCRIPTION OF THE PROPOSED ACTION

The USAF and Navy propose to conduct IOT&E, and beddown up to 27 CV-22 aircraft at Hurlburt Field, Florida. Specifically, activities to be performed as part of the Proposed Action include the following:

- Conduct IOT&E of three aircraft in 2007-2008
- Assignment of up to 27 CV-22s to 16th SOW

The beddown would be conducted over an 11-year period beginning in Fiscal Year (FY) 2007 (Table 2.1-1). When the CV-22 is fully deployed, AFSOC will have replaced its MH-53 helicopter fleet with the CV-22 aircraft. At full deployment, the CV-22 will operate at approximately 117% of the calendar year 1999 MH-53 operating rate.(USAF, 2001a).

TABLE 2.1-1: CV-22 DEPLOYMENT SCHEDULE											
CV-22 Aircraft	*Fiscal Year*										
	07	**08**	**09**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**
Annual assignments	3	2	2	0	3	1	1	3	3	5	4
CV-22 Totals	**3**	**6**	**8**	**8**	**11**	**12**	**12**	**15**	**18**	**23**	**27**

2.1.1 IOT&E Operations

By law, IOT&E must be conducted before the CV-22 can be put into full production and provided to the USAF for operational use. The USAF and Navy propose to perform the IOT&E with twenty personnel and additional support from existing personnel at Hurlburt Field. The projected period of time commences in October 2007 and continues through March 2008. Total IOT&E operational time is estimated at 475 hours.

Location	Dates	Estimated Hours
Nellis AFB	10/07 – 11/07	173
Hurlburt Field/ Eglin AFB	11/07 – 01/08	130
Nellis AFB	2/08 – 03/08	172

IOT&E activities beyond Hurlburt Field are addressed in activity-specific NEPA documentation, as discussed previously in Section 1, *Purpose and Need for Action*. The following description of IOT&E operations beyond Hurlburt Field are provided for informational purposes.

IOT&E activities will not require supersonic flight. Activities do not include intentional fuel dumping below 6,000 feet. No new facilities or utilities will be necessary to support IOT&E. The aircraft will reside in existing hangars while at Hurlburt Field and Nellis AFB.

IOT&E activities will conform to established air operations and range procedures. Activities will include low-level or hover flight below 500 feet, and low-level fixed wing aircraft flight below 3,000 feet, excluding local airfield operations. Operations will be conducted during the day, at night, in adverse weather, and under extreme and varied environmental conditions, if available. IOT&E activities

will utilize standard aircraft support equipment and vehicles. Appendix B contains a list of helicopter landing zones that will be utilized.

Standard and specific IOT&E activities would be performed and would include the following:

Air land: Aircraft will perform a short run-on or hover landing to a designated Global Positioning (GPS) spot or target. Special Operations Forces will deplane or emplane depending on the period of the mission. Aircraft engines will be running at all times. Some simulated firing of weapons may occur. In some cases, forces may have All Terrain vehicles (ATVs) or other small vehicles with them.

Hover operations: Aircraft will reach a GPS designated point and come to a hover above the ground. Special Operations Forces will either fastrope from the aircraft to the ground, climb a ladder from the ground in to the aircraft, or ride the rescue hoist from the ground in to the aircraft. Once forces are secured on the ground or in the aircraft, the aircraft will depart the area.

Water operations: The V-22 would conduct water insertion evaluations off the coast of the Gulf. The V-22 aircraft will deploy a trained assault unit and approach the shoreline within two to five miles. Scuba gear or small boats will be utilized. Once equipment and troops are deployed, the aircraft will transition to forward flight and return to shore.

Aerial refueling: Aircraft will use designated refueling tracts to meet up with tanker aircraft and take on a specific amount of fuel for mission requirements.

Electronic warfare (EW): Aircraft will fly through threat simulations operated by range personnel. These will primarily be a low level flight and chaff and flare dispensing could occur.

2.1.2 CV-22 Support: Maintenance and Personnel

The CV-22 maintenance program would be performed by existing 16th SOW maintenance and support personnel. No additional support personnel from outside organizations would be utilized. The CV-22 would have a three-level maintenance program for USSOCOM: organizational, intermediate, and depot. Organizational maintenance tasks include all inspections, repairs, servicing, removal, and replacement of faulty systems, and checkouts performed on the aircraft. The workforce would include the Helicopter Crew Chief and specialists in the fields of Integrated Avionics, Propulsion, Hydraulics, and Electro-Environmental maintenance. The majority of the scheduled and unscheduled maintenance would be performed at this level. Depot level maintenance requires

highly specialized skills, sophisticated equipment, and special facilities; for example, the major overhaul or replacement of critical components or the repair of a crash damaged aircraft (USAF, 2000a).

Maintenance activities are expected to be performed at existing Hurlburt Field facilities. The total number of support personnel required for the CV-22 Osprey beddown at Hurlburt Field would increase to a maximum of 1791 in FY17. However, current MH-53 operations at Hurlburt Field will decrease during this timeframe, as CV-22 aircraft replace the older aircraft. As reported in the 2001 CV-22 Beddown EA (USAF, 2001a), annual manpower requirements for operations, maintenance, and overhead necessary to field the FY00 inventory of MH-53 aircraft totaled 891. The projected additional manpower requirements necessary to field up to 27 CV-22 aircraft is approximately 900. This represents an increase of approximately 10 percent. If necessary, local contractor support may be utilized to augment the CV-22 maintenance support staff.

2.1.3 CV-22 Operations Evaluated in Other NEPA Documentation

Training and tactical operations for the CV-22 Osprey aircraft, including IOT&E, would be conducted at established outlying ranges and landing fields; established special airspace such as military operation areas; and established landing zones and target areas.

The airspace routes to be flown by the CV-22 include LATN areas and MTRs. Evaluation of potential impacts associated with all approved aircraft operations, including CV-22 operations, beyond Hurlburt Field, has been performed in activity-specific NEPA Documentation. Each of the activity-specific EAs recommended a FONSI, since human health and the natural environment would not be significantly impacted as a result of the respective Proposed Action. IOT&E activity to be conducted at Nellis AFB qualified for a CATEX. NEPA documentation includes:

- Categorical Exclusion for the IOT&E of the CV-22 at Nellis AFB, Nevada. January 18, 2007.
- Environmental Assessment – Modification of Existing Slow Speed Low Altitude Military Training Route SR-101 (USAF, 2006a).
- Environmental Assessment – Modification of Existing Slow Speed Low Altitude Military Training Route SR-103 (USAF, 2006c).
- Environmental Assessment – Alteration of Existing Instrument Flight Rule Military Training Routes IR-057 and IR-059 (USAF, 2006d).
- Environmental Assessment – Modification of Existing Slow Speed Low Altitude Military Training Route SR-119 (USAF, 2006e).

- Environmental Assessment – Proposed Establishment of Instrument Route IR-1090 (USAF, 2006f).
- Environmental Assessment – Low Altitude Training Navigation Area (LATN) (USAF, 2006g). This EA includes an extensive evaluation of the cumulative effects of all of the EAs in this list.

2.1.4 Targets and Ranges

Readiness operations of the CV-22 Osprey would include the use of Eglin AFB ranges. A list of landing zones to be used is provided for reference in Appendix B. Use of approved ordnance would occur within the ranges contained at Eglin AFB. Air Armament Center (AAC) provides environmental analyses for range operations and necessary NEPA documentation. Eglin NEPA documentation is extensive and dynamic. Current range operations have been documented in numerous EAs. Subsequent FONSI documentation has been completed for the following (at a minimum): TA B-70; TA C-52 Complex; Interstitial Area; Cape San Blas; Eglin Gulf Test & Training Range; TA C-80; Overland Air Operations; TA B-12; TA C-72; Test Area Maintenance; TA B-75; TA B-71/82; TA C-64; TA C-62; TA C-74; Electromagnetic Radiation; Air-to-Ground Gunnery; Riverine/Estuarine; and Range Roads.

The Environmental Impact Analysis Process (EIAP) at Eglin AFB is in the scoping stage for an EIS to address impacts associated with mission changes resulting from the DoD Base Realignment and Closure initiatives. Aircraft operations, including CV-22 operations, will be evaluated as part of this EIS. The EIS process includes formal public scoping and development of alternatives, a detailed impact assessment, and highly detailed mitigation measures.

The test ranges at Nellis AFB being utilized for IOT&E will be the Desert Military Operating Area (MOA) and R- 4806/4807/4808/4809 areas. The ranges will be used for flying only. AFOTEC will be landing off the airfield within 5 miles of Indian Springs on the dry lake bed located between the Indian Springs runway and the Mig 29 and on all approved HH-60 landing zones. All ranges have been assessed for environmental impacts in a Legislative EIS, Renewal of the Nellis Air Force Range Land Withdrawal, November 1999.

2.1.5 Modification of Facilities

In September 2001, the USAF prepared an EA to evaluate the environmental impacts associated with demolition and construction activities for buildings and hangar facilities necessary for training CV-22 personnel and accommodating beddown of the CV-22 aircraft and maintenance activities at Hurlburt Field. The EA was approved and a FONSI was issued (USAF, 2001a).

Subsequently, the construction, demolition and facility modifications proposed in the 2001 EA have been completed. No further facility modifications are included in the Proposed Action for this 5-Year Update EA.

IOT&E at Nellis AFB will not require the construction of new facilities (temporary or permanent) or changes to existing structures including demolition or renovation.

2.2 NO ACTION ALTERNATIVE

Under the No Action Alternative the beddown of the CV-22 Osprey would not occur at Hurlburt Field. The USAF and 16th SOW would not have access to the enhanced capabilities of the CV-22 Osprey; therefore, the ability to quickly insert assault forces or extract military personnel and American citizens with a greater degree of operational effectiveness and safety would be reduced. Selection of the No Action Alternative would result in the continued use of the MH-53 helicopters by the 16th SOW and the USAF.

Under the No Action Alternative, CV-22 IOT&E would not be conducted. By not performing these tests, no data would be collected for the CV-22's capability to perform the operations that the tests represent, the CV-22's potential operational effectiveness would not be assessed, the suitability of the V-22 variant models to perform the operations that these tests represent would not be assessed, verification of correcting previously identified deficiencies would not be confirmed, and deferred testing from preceding test phases would not be completed. Future acquisition of the CV-22 would be jeopardized.

Under the No Action Alternative, pilots and maintenance personnel would continue to be trained at Hurlburt Field; however, as the MH-53's continue to age, maintenance of the helicopters would become more costly and increased maintenance training would be required. Rotor and fixed wing operations would continue at a rate similar to current levels at Hurlburt Field. Thus, the impacts of the No Action Alternative are a continuation of existing conditions, as described in Section 3.0 of this EA.

2.3 IDENTIFICATION OF ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

This section does not discuss alternatives for beddown of the CV-22 because that decision was made in the original 2001 EA and FONSI.

Alternatives considered for IOT&E included Kirtland AFB, NM and China Lake, CA. However, Hurlburt Field and Eglin AFB have the Electronic Warfare (EW) range, foliated jungle environment, and the water access necessary for deploying

troops into the water. Kirtland AFB does not have EW ranges available and China Lake's EW ranges were not guaranteed for immediate availability. Nellis AFB has available EW ranges and a desert environment necessary for Special Operation Forces ground operations. Therefore, Kirtland AFB and China Lake were eliminated from further consideration.

2.4 IDENTIFICATION OF THE PREFERRED ALTERNATIVE

The Agency preferred alternative is the Proposed Action.

SECTION 3.0
AFFECTED ENVIRONMENT

This section presents information on environmental conditions for resources potentially affected by the Proposed Action and the Alternative Action described in Section 2.0. Under the National Environmental Policy Act (NEPA), the analysis of environmental conditions should address only those areas and environmental resources with the potential to be affected by the Proposed Action or alternatives; locations and resources with no potential to be affected need not be analyzed. The topics evaluated in this section and subsequently analyzed in Section 4.0 were selected based on their relevance, as described in Section 1.0.

3.1 HURLBURT FIELD AIRSPACE

Airspace is managed by Federal Aviation Administration (FAA) rules, regulations, and procedures to ensure safe operation by all types of aviation users. The military has had a historical presence in the Hurlburt Field area both on the ground and in the air. Flight safety is a major concern for the U.S. Air Force and the continued realistic training of military personnel in preparation of potential contingencies is vital for maintaining safe flying activities. Bird-aircraft strikes constitute safety concerns due to the potential to damage aircraft and injure the aircrew.

3.2 AIR QUALITY

3.2.1 Air Pollutants and Regulations

The Clean Air Act of 1970 (CAA) directed the United States Environmental Protection Agency (USEPA) to develop, implement, and enforce strong environmental regulations that would ensure cleaner air for all Americans. In order to protect public health and welfare, the USEPA developed concentration-based standards called National Ambient Air Quality Standards (NAAQS). The USEPA established both primary and secondary NAAQS under the provisions of the CAA. Primary standards define levels of air quality necessary to protect public health with an adequate margin of safety. Secondary standards define levels of air quality necessary to protect public welfare (i.e., soils, vegetation, property, and wildlife) from any known or anticipated adverse effects.

NAAQS currently are established for six air pollutants (known as "criteria air pollutants") including carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), sulfur oxides (SO_X, measured as sulfur dioxide, SO_2), lead (Pb), and particulate matter. Particulate matter standards incorporate two particulate classes: 1) particulate matter with an aerodynamic diameter less than or equal to 10 micrometers [PM_{10}] and 2) particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers [$PM_{2.5}$].

The CAA does not make the NAAQS directly enforceable; however, the CAA does require each state to promulgate a State Implementation Plan (SIP) that provides for implementation, maintenance, and enforcement of the NAAQS in each air quality control region (AQCR) in the state. Title I of the CAA requires that all federal facilities conform to the provisions of the SIP. The CAA Amendments of 1990 (CAAA) are currently the comprehensive federal legislation regulating the prevention and control of air pollution. Title I of the CAAA requires federal actions to conform with the provisions of the approved SIP, which is developed and maintained by the Florida Department of Environmental Protection (FDEP). Title V of the CAAA requires identification and characterization of emissions from all minor sources including aircraft maintenance facilities, fuel storage tanks, and emissions from aircraft and motor vehicles.

The USEPA classifies the air quality within an AQCR according to whether or not the concentration of criteria air pollutants in the atmosphere exceeds primary or secondary NAAQS. All areas within each AQCR are assigned a designation of either attainment, nonattainment, unclassifiable attainment, or not designated attainment for each criteria air pollutant. An attainment designation indicates that the air quality within an area is as good as or better than the NAAQS. Nonattainment indicates that air quality within a specific geographical area exceeds applicable NAAQS. Unclassifiable and not designated indicates that the air quality cannot be or has not been classified on the basis of available information as meeting or not meeting the NAAQS and is treated as attainment.

As promulgated in the Florida Administrative Code, Title 62, Chapter 204.240, the State of Florida has adopted each of the NAAQS as the Florida standards except for SO_2 as listed in Table 3.2-1.

Table 3.2-1 National and State Ambient Air Quality Standards

Criteria Pollutant	Averaging Time	Primary NAAQS[a,b,c]	Secondary NAAQS[a,b,d]	Florida Standards[a,b, e]
Carbon Monoxide	8-hour 1-hour	9 ppm (10 mg/m^3) 35 ppm (40 mg/m^3)	No standard No standard	9 ppm (10 mg/m^3) 35 ppm (40 mg/m^3)
Lead	Quarterly	1.5 μg/m^3	1.5 μg/m^3	1.5 μg/m^3
Nitrogen Dioxide	Annual	0.0543 ppm (100 μ g/m^3)	0.0543 ppm (100 μg/m^3)	0.0543 ppm (100 μg/m^3)
Ozone	1 hour[e]	0.12 ppm (235 μg/m^3)	0.12 ppm (235 μg/m^3)	0.12 ppm (235 μg/m^3)
PM_{10} [e]	Annual 24-hour	50 μg/m^3 150 μg/m^3	50 μg/m^3 150 μg/m^3	50 μg/m^3 150 μg/m^3
Sulfur Oxides (measured as SO_2)	Annual 24-hour 3-hour	0.03 ppm (80 μg/m^3) 0.14 ppm (365 μg/m^3) No standard	No standard No standard 0.50 ppm (1,300 μg/m^3)	0.02 ppm (60 μg/m^3) 0.10 ppm (260 μg/m^3) 0.50 ppm (1300 μg/m^3)

PM_{10} Particles with aerodynamic diameters less than or equal to a nominal 10 micrometers

a The 8-hour primary and secondary ambient air quality standards are met at a monitoring site when the average of the annual fourth-highest daily maximum 8-hour average ozone concentration is less than or equal to 0.08 ppm.

b The NAAQS and Florida standards are based on standard temperature and pressure of 0 degrees Celsius and 760 millimeters of mercury.

c National Primary Standards: The levels of air quality necessary to protect the public health with an adequate margin of safety. Each state must attain the primary standards no later than three years after the state implementation plan is approved by the USEPA.

d National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. Each state must attain the secondary standards within a "reasonable time" after the state implementation plan is approved by the USEPA.

e $PM_{2.5}$ Standard is in effect, but $PM_{2.5}$ SIPs are not anticipated to be final until mid-2008.

3.2.2 Regional Air Quality

Hurlburt Field is within the jurisdiction of the Northwest District AQCR of the FDEP. Specifically, the installation is in AQCR 5, which encompasses southern Alabama, southern Mississippi, and north Florida. Aircraft represent the major source of air emissions at Hurlburt. Okaloosa County, including Hurlburt, is in an attainment area for all NAAQS criteria pollutants. There is currently no established baseline of criteria pollutants for AQCR 5, the attainment area encompassing Hurlburt (USAF, 2005).

Major stationary sources of air pollution on Hurlburt Field include: aircraft refueling, storage tanks, vehicle refueling, landfills, architectural and industrial maintenance coatings, aircraft engine test cell, natural gas-fired boilers, fugitive emissions, and auxiliary power generators. Historically, Hurlburt has been classified as a synthetic minor air pollution source. The synthetic minor source designation is defined as sources that have the physical and operational

capability to emit major source levels of pollutants, but are not considered major sources because the owner/operator has accepted an enforceable limitation. This designation allows Hurlburt Field to operate without a Title V permit and reduced levels of regulatory screening, but it does limit emissions to levels below a set major source ceiling (USAF, 2005).

3.2.3 Hurlburt Field Baseline Air Emissions

An air emissions inventory is an estimate of total mass emissions of pollutants generated from a source or sources over a period of time, typically a year. The quantity of air pollutants is generally measured in pounds (lbs) per year or tons per year (tpy). Emission sources may be categorized as either mobile or stationary emission sources. Typical mobile emission sources at Air Force installations include aircraft, on- and off-road vehicles, and aerospace ground equipment (AGE). Stationary emission sources may include boilers, generators, fueling activities, industrial processes, and burning activities, among others.

Baseline emissions inventory data for Hurlburt Field and Okaloosa County, Florida, are presented in Table 3.2-2. Emission quantities presented in Table 3.2-3 for AQCR 5 only include significant stationary sources, quantities from mobile sources (e.g., aircraft, automobiles, etc.) have not been determined for AQCR 5 (USAF, 2001a).

Table 3.2-2 Estimated Baseline Emissions Inventory, Hurlburt Field and Okaloosa County, FL

Criteria Air Pollutant	CO (tpy)	VOC (tpy)	SO_2 (tpy)	NO_2 (tpy)	PM_{10} (tpy)	Pb (tpy)
Hurlburt Field, FL	4.24	27.98	0.2	7.59	6.33	<0.01
Okaloosa County, FL	151,986	20,187	668	8,788	16,656	NR[a]

[a] NR – Not Reported.
tpy tons per year.
Source: Military Family Housing Demolition, Construction, Renovation and Leasing (DCR&L) Program Revised Draft EIS, March 2006 (USAF, 2006h).

Table 3.2-3 Stationary Source Emissions Inventory, AQCR 5

Criteria Air Pollutant	CO (tpy)	VOC (tpy)	SO_x (tpy)	NO_x (tpy)	PM_{10} (tpy)	Pb (tpy)
Current Emissions Total[a]	74,603	28,078	208,375	110,835	7,231	7

[a] Summarized from the USEPA's AIRSData Source Count Inventory Report (USEPA, 2000).
tpy tons per year

3.3 NOISE

A general discussion of noise metrics and noise exposure as it relates to airspace follows.

3.3.1 Noise Metrics

Noise represents one of the most prominent environmental issues associated with aircraft activities. The noise environment around a military or civil airfield normally is described in terms of the time-average sound level generated by the aircraft operating at that facility. The Department of Defense has established the Air Installation Compatible Use Zone (AICUZ) program to protect the health, safety, and welfare of those living near military airfields while preserving flying mission needs.

The AICUZ program at Hurlburt Field delineates various noise level contours: 65 to 85 decibel (dB) average day-night sound levels, or DNL. Operational constraints have been established based on these DNL contours (USAF, 2005). A figure of these operational constraints, as published in the 2005 Hurlburt Field General Plan EA, is provided in Appendix C. Hurlburt aircraft activities generally include fixed- and rotary-wing arrivals and departures at the airfield, flight patterns in the general vicinity of the airfield, and aircraft engine "run-ups" associated with engine pre-flight and maintenance checks. Aircraft noise, whether generated by engines on fixed-wing aircraft or by engines and blade slap on rotary-wing aircraft, generally presents little problem in relation to land use on Hurlburt. The existing 65 dB average noise contours from aircraft activities on the Hurlburt Field flight-line has been shown as completely on Hurlburt or extending over water areas (USAF, 2005).

3.3.2 Training Area Airspace Noise

Range operations and airspace routes to be flown by the CV-22 will be evaluated for environmental impacts, including noise, associated with adding CV-22 aircraft, and other aircraft (i.e., A-10, CA-212), in separate EA documentation currently in preparation, as described in Section 1.0.

3.4 COASTAL ZONE MANAGEMENT

The Coastal Zone Management Act (CZMA) of 1972 requires federal facilities to carry out their activities in a manner consistent with the state's coastal zone management program. The entire state of Florida is considered to be within the coastal zone, as regulated by the Florida Coastal Zone Protection Act of 1985 and administered by the Florida Department of Environmental Protection (FDEP).

As a result, the state has the authority to review federal actions for consistency with the Florida Coastal Management Program (FCMP).

The FCMP consists of a network of agencies implementing 23 Florida statutes that protect and enhance the state's natural, cultural, and economic coastal resources. The goal of the program is to coordinate local, state and federal agency activities using existing laws to ensure that Florida's coast is as valuable to future generations as it is today.

The FCMP operates the Florida State Clearinghouse, which circulates applications for federal activities, including federal permits and funding, to government agencies that have statutory authority over some part of the activity (FDEP, 2005).

Under the State Clearinghouse program, the office of Intergovernmental Programs serves as the state's single point-of-contact for the Florida State Clearinghouse and coordinates FDEP's position on the consistency of federal projects and federally funded activities with departmental policies and regulations, and provides comments to the Florida State Clearinghouse in accordance with Executive Order 12372: *Intergovernmental review of Federal programs*, NEPA, CZMA, as well as other federal laws and policies (FDEP, 2005).

3.5 WASTES AND WASTE MANAGEMENT, HAZARDOUS MATERIAL MANAGEMENT, AND STORED FUEL

3.5.1 Wastes and Waste Management

Requirements for waste management at Hurlburt Field are established through Air Force Instruction 32-7042, Solid and Hazardous Waste Compliance. Hurlburt field implements waste management activities in accordance with several waste-specific management plans (USAF, 2005):

In accordance with the Hurlburt Field Solid Waste Management Plan, nonhazardous solid waste is removed by a contractor for off site disposal. Recyclables are also removed from the base by a contractor.

Hurlburt Field is a large-quantity generator of hazardous waste under EPA identification number FL7570024375. Facilities that generate more than 2200 pounds of hazardous waste annually are regulated as a large-quantity generator. The Hazardous and Special Waste Management Plan ensures the proper handling, accumulation, and disposal of all hazardous/special wastes generated at Hurlburt.

Reuse, recycling and disposal requirements for recoverable and used lubricants are detailed in the Hurlburt Field Recoverable and Used Oil Management Plan.

3.5.2 Hazardous Material Management

Pesticide use at Hurlburt is governed through implementation of the annually updated Integrated Pest Management Plan. Asbestos is regulated by FDEP, Executive Order 12088, and Air Force Instruction 32-1052. Hurlburt manages asbestos and lead-based paint in accordance with the Asbestos Management Plan, Asbestos Operations Plan, and Lead-based Paint Management Plan. Hurlburt Field's Spill Prevention Control and Countermeasures (SPCC) plan addresses control and clean-up of fuel and lubricant spills (USAF, 2005).

3.5.3 Stored Fuel

There are 25 aboveground storage tanks (ASTs) on Hurlburt Field that store fuel. Their capacities range from 1,000 to 840,000 gallons. These tanks store primarily JP-8, gasoline, and diesel fuel for vehicles and aircraft (DEP, 2000). Fuel is delivered to the base by tank trucks. All underground storage tanks (USTs) have been removed from Hurlburt Field. The work was completed in April 1995.

3.6 BIOLOGICAL RESOURCES

A detailed road map for the stewardship of all natural resource assets found on Hurlburt Field is provided in the Hurlburt Field Integrated Natural Resources Management Plan (INRMP). Implementation of individual projects outlined in the INRMP has been addressed in the Environmental Assessment of INRMP Implementation (USAF, 2001b).

3.6.1 Vegetative Communities

Vegetation at Hurlburt Field within the unimproved areas consists of long-leaf pine flatwoods and cypress swamps. Turf and/or landscaped areas encompass 674 acres of improved and 834 acres of semi-improved grounds on the installation, including a 160-acre golf course (Woolpert, 2002). Additional plant communities within the installation include sandhill, cypress domes, sand pine scrub, maritime hammock, and some disturbed plant associations (USAF, 2005).

3.6.2 Wetlands

Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted

for life in saturated soil conditions" (U.S. Army Corps of Engineers, 1987). Formal delineations of state and federal jurisdictional wetlands were conducted in 1995-1997 and confirmed by the U.S. Army Corps of Engineers and the FDEP (Woolpert, 1998). Federal regulations applicable to wetlands include Executive Order 11990 and Section 404 of the Clean Water Act. Air Force Instruction 32-7064 directs that all installations shall develop and maintain current inventories of wetlands in order to plan for long-term protection or mitigation.

The most common wetland types within Hurlburt Field include cypress-gum swamps/cypress domes, shrub wetlands, and herbaceous wetlands. The installation is generally divided into two drainage basins or watershed regions. The majority of wetland areas occur within the northern half of the installation; this region of the base primarily drains to the north and northwest into East Bay Swamp. The remaining southern portion of the base drains southward into Santa Rosa Sound. Wetland areas comprise a major portion of the base with approximately 3,400 acres of jurisdictional wetlands, comprising 52 percent of the entire installation (USAF, 2005).

3.6.3 Wildlife

A variety of wildlife is found within Hurlburt Field. Fish species are found in Hurlburt Lake, several golf course ponds, the East Bay River, and in several large drainage ditches (Woolpert, 2002). Terrestrial vertebrate fauna that occur within the installation include many species of amphibians, reptiles, mammals, and birds (both resident and migrant). A master list of potential vertebrate fauna (terrestrial and aquatic) for the installation, with observed species noted, is provided in the Integrated Natural Resources Management Plan and Environmental Assessment: Hurlburt Field (USAF, 2001b).

The Mississippi Flyway is the nearest migratory bird route to Hurlburt Field, but lies beyond the region of influence for Hurlburt Field. Although generally centered along the Mississippi river, it extends varying distances east and west of the river at different points. Hurlburt Field is not a major fallout or stopover area where large numbers of migratory birds stop during spring and autumn migrations (USAF, 1998).

3.6.4 Endangered, Threatened, and Species of Special Concern

The U.S. Fish and Wildlife Service (USFWS) lists species that are endangered or threatened and those that are proposed for endangered or threatened status. An endangered species is defined as any species in danger of extinction throughout all or a significant portion of its range. A threatened species is one that is likely to become endangered in the foreseeable future. Surveys for rare species in recent years include those documented by the Nature Conservancy/Florida Natural Areas Inventory (FDNR, 1994) and Printiss and Hipes (Printiss, 1997).

Important habitat areas for threatened and endangered wildlife are widespread at Hurlburt Field. The forested wetlands and pine flatwoods support a diversity of wildlife species on base. The majority of these areas are pine flatwoods and cypress head wetlands on the western side of the base. A number of state Rare, Threatened and Endangered plant species occur on Hurlburt, with the greatest density of these species occurring on the wetland areas in the western portion of the installation (USAF, 2001b).

No federal endangered plant species have been located on the installation. The most widespread state-listed plant species known on the installation include the white-top pitcherplant (*Sarracenia leucophylla*), parrot pitcherplant (*Sarracenia psittacina*), Chapman's butterwort (*Pinguicula planifolia*), Curtiss' sandgrass (*Calamovilfa curtissii*), and Carolina lilaeopsis (*Lilaeopsis carolinensis*) (USAF, 2005).

Three federal-listed animals have been historically reported within or adjacent to the installation: the threatened, flatwoods salamander (*Ambystoma cingulatum*); the threatened, bald eagle (*Haliaeetus leucocephalus*); and the endangered, red-cockaded woodpecker (*Picoides Borealis*) (USAF, 2005).

State-listed or rare species of vertebrate fauna that were documented during surveys include: Bachman's sparrow (*Aimophila aestivalis*), great egret (*Ardea alba*), reddish egret (*Egrette rufescens*), coal skink (*Eumeces anthracinus*), gopher tortoise (*Gopherus polyphemus*), osprey (*Pandion haliaetus*), brown pelican (*Pelecanus occidentalis*), and least tern (*Stern andillarum*) (USAF, 2005).

3.7 CULTURAL RESOURCES

The protection and management of cultural resources is required by a number of Federal laws including the National Historic Preservation Act (NHPA), the Archaeological Resource Protection Act of 1979 (ARPA), the American Indian Religious Freedom Act of 1978 (AIRFA), the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA), and the Archaeological and Historic Preservation Act of 1974 (AHPA). Of particular note to military installations are Sections 106 and 110 of the NHPA. Section 106 provides direction for Federal agencies for undertakings that affect properties listed, or eligible for listing, on the National Register of Historic Places (NRHP). Section 110 requires federal agencies to locate, inventory, and nominate all properties that may qualify for the NRHP. Section 106 and Section 110 compliance procedures specific to Hurlburt Field are provided in the Cultural Resources Management Plan, Hurlburt Field (USAF, 2001c).

3.7.1 Archaeological Resources

Archaeological resources (prehistoric and historic) are locations where human activity measurably altered the earth or left deposits of physical remains (e.g., tools, arrowheads, or bottles). "Prehistoric" refers to resources that predate the advent of written records in a region. These resources can range from a scatter composed of a few artifacts to village sites and rock art. "Historic" refers to resources that postdate the advent of written records in a region. Archaeological resources can include campsites, roads, fences, trails, dumps, battlegrounds, mines, and a variety of other features. A Summary of Prehistoric/Historic Periods in the region that encompasses Hurlburt Field is provided in the Cultural Resources Management Plan, Hurlburt Field (USAF, 2001c).

3.7.2 Traditional Cultural Resources

Traditional cultural resources can include archaeological resources, buildings, neighborhoods, prominent topographic features, habitats, plants, animals, and minerals that Native Americans or other groups consider essential for the continuance of traditional cultures.

To be considered significant, archaeological or architectural resources must meet one or more criteria as defined in 36 CFR 60.4 for inclusion in the NRHP. DoD policy regarding consultations with Native Americans was established in 2000. The policy recognized the importance of understanding and addressing tribal concerns prior to reaching decisions on matters that may affect protected tribal resources, tribal rites or tribal lands. Amendments of NHPA in 1992 include establishment of a program to assist Native Americans in historic preservation, and require each Federal agency to establish a preservation program for the identification, evaluation, protection, and nomination to the NRHP of historic properties.

There are no legally established criteria for assessing the importance of traditional cultural resources. These criteria must be established through consultation with Native Americans, in accordance with the requirements of the NHPA. When applicable, consultation with other affected groups provides the means to establish the importance of their traditional resources. This also can be accomplished using 36 CFR 60.4 and the Advisory Council on Historic Preservation Guidelines. The Native American Graves Protection and Repatriation Act (1990) defines the procedures for consultation and treatment of Native American burials and burial artifacts.

Past surveys at Hurlburt Field have located relatively few archaeological resources. Previous cultural resource investigations included one conducted from 1982 to 1990 as part of the large-scale Historic Preservation Plan for Eglin AFB, a National Park Service survey of five project areas in 1988, and several

surveys by the Army Corp of Engineers (USACE) between 1991 and 1994. Nine archeological sites have been identified in these past surveys of the installation. These previous surveys made recommendations for additional investigations at several sites to determine eligibility for listing on the NRHP. Phase II testing was conducted at five sites in 1997 by Brockington and Associates to determine eligibility of those sites (Site Numbers 80K61, 80K133, 80K126, 80K380, and 80K5). As a result of Phase II surveys these five sites have been determined to be eligible for listing. The remaining four sites (80K168, 80K309, 80K474, and 80K167) were determined to be not eligible for listing on the NRHP. Further details regarding these sites, including compliance procedures for inadvertent discovery of cultural resources, are contained in the Hurlburt Field Cultural Resources Management Plan (USAF, 2001c).

3.8 LAND USE

Land use planning is directed by the Hurlburt General Plan. Environmental impacts associated with implementation of the General Plan have been documented with an environmental assessment. (USAF, 2005) Hurlburt Field maintains a Land Use Plan that identifies thirteen land use designations for Hurlburt Field. These designations are:

- Runway Primary Surface and Clear Zones
- Aircraft Runway/Taxiway
- Aircraft Operations and Maintenance
- Industrial
- Administrative
- Community Commercial
- Community Service
- Medical
- Accompanied Housing
- Unaccompanied Housing
- Outdoor Recreation
- Open Space
- Water

The plan stresses that land uses on Hurlburt Field should be located to maximize their functional relationships and to minimize conflicts. For example, aircraft activities should be located near aircraft runways and taxiways for operational efficiency; however, housing should not be located near runways due to noise considerations

Runway 18/36 is oriented north-south and located in the eastern portion of the field. Aircraft activities and maintenance facilities are located on either side of the runway, as well as industrial facilities. The majority of the residential housing

is located near the center of the field, 3,500 feet or more west of the runway. There is also a large accompanied housing area in the far northeastern corner of the base. Commercial areas generally are oriented to the residential areas, except for the new commissary and Base Exchange (BX), which are located on the east side of the runway, near the medical complex. Recreational facilities are interspersed around the residential areas, with the exception of the golf course which is located in the northeastern portion of the base to the east of the runway.

3.9 ENVIRONMENTAL JUSTICE/SOCIOECONOMICS

Concern that children may suffer disproportionately from environmental health risks and safety risks led to the issuance of Executive Order 13045 in 1997. Concern that minority populations and/or low income populations bear a disproportionate amount of adverse health and environmental effects led to the issuance of Executive Order 12898, in 1994. The USAF Environmental Impact Analysis Process (32 CFR 989) addresses the need for consideration of environmental justice issues in the impact analysis process. The purpose of an Environmental Justice analysis process is to identify disproportionately high and adverse human health and safety and environmental impacts on minorities and low-income communities and to identify appropriate alternatives. Executive Order 12898 also requires the application of equal consideration for American Indian populations. Procedures for compliance with relevant laws are outlined in Hurlburt Field's Cultural Resources Management Plan (USAF, 2001c). Hurlburt Field is located in Okaloosa County, Florida. Comparison of minority and low-income population percentages is provided in Table 3.9-1.

Table 3.9-1 Estimated Minority and Low Income Populations

	Okaloosa County [a]	**Florida** [a]
Percent Minority (2004 data) [a]	15.9 %	19.4 %
Percent Low Income (2003 data) [a]	9.9 %	13.0 %

[a] Source: http://quickfacts.census.gov/qfd/states/12/12091.html

SECTION 4.0
ENVIRONMENTAL CONSEQUENCES

Environmental consequences are the impacts (effects) that the Proposed Action and No Action Alternative will have on the affected environment, as defined previously in Section 3.

4.1 HURLBURT FIELD AIRSPACE

The purpose of this section is to describe the environmental impact of activities associated with the Proposed Action at Hurlburt Field and the related airspace components of interest. The Proposed Action is to conduct IOT&E and beddown up to 27 CV-22 aircraft at Hurlburt Field, Florida. It calls for a progressive retirement of the currently operational MH-53J Pave Low III helicopters and the fielding of 27 CV-22 aircraft. The time frame for the implementation of this action is FY07 to FY17.

Aircraft use different kinds of airspace according to the specific rules and procedures defined by the FAA for each type of airspace. To inform all pilots about airspace management, the FAA requires aeronautical charts be published depicting altitudes, widths, and hours of operation. The FAA recommends that pilots study published charts and communicate with local air traffic facilities to obtain specific information about aircraft flying in the area in order to ensure safe operation in or transit of airspace designated for military use. The determination of significance focuses on how and to what degree airspace and safety would be affected, and the ability of existing programs to manage an increase in potential risks.

4.1.1 Proposed Action

Hurlburt Field is located within the airspace boundaries of the Eglin AFB Reservation. This EA evaluates the CV-22 beddown and IOT&E activities at Hurlburt Field that are only within Hurlburt Field airspace. The scheduling of the routes by the 16th SOW would ensure no conflicts between military aircraft arise (USAF, 2004).

CV-22 flight activities identical to those to be conducted in IOT&E that are conducted beyond the boundaries of Hurlburt Field are addressed in NEPA documentation prepared specifically for low altitude training navigation, military training routes, Nellis AFB, and the Eglin Range Complex, and are not addressed in detail in this EA, as discussed in Section 1.2.2.

4.1.2 No Action Alternative

Under the No Action alternative, airspace management or use would not be altered. As a result, no additional impacts on airspace would be anticipated.

4.2 AIR QUALITY

Section 176(c)(42 U.S.C. 7506) of the Clean Air Act (CAA) requires Federal agencies to ensure that their actions conform to the applicable State Implementation Plan (SIP) for attaining and maintaining the National Ambient Air Quality Standards (NAAQS). The CAA Amendments of 1990 clarified and strengthened the provisions in Section 176(c).

If an action is determined to have total direct and indirect emissions for a given pollutant that are at or above the de minimis level for that pollutant, Federal agencies must conduct a General Conformity determination for the pollutant unless the action is presumed to conform under the regulation or the action is otherwise exempt. If the action's emissions are below an applicable de minimis level, a Federal agency does not have to conduct a conformity determination.

Impacts to air quality would be considered significant if pollutant emissions associated with the implementation of the federal action caused or contributed to a violation of any national or state ambient air quality standard, exposed sensitive receptors to substantially increased pollutant concentrations, represented an increase of ten percent or more in affected AQCR's emissions inventory, or exceeded any significance criteria established by the Florida SIP.

4.2.1 Proposed Action

The USEPA has established default times-in-mode for various categories of aircraft (e.g., air transport, general aviation, military transport, etc.). Published aircraft engine emission factors are based on maximum performance takeoffs and climbouts of commercial aircraft using the commercial version of the aircraft engine. Proposed Action pollutant emissions resulting from increased CV-22 activities and the net change (replacement of MH-53 inventory with 27 CV-22 aircraft) in pollutant emissions within AQCR 5 are also presented in Table 4.2-1.

Table 4.2-1 Change in Emissions at Hurlburt Field Due to CV-22 Aircraft

Criteria Air Pollutant	CO (tpy)	VOC (tpy)	SO_x (tpy)	NO_x (tpy)	PM_{10} (tpy)	Pb (tpy)
AQCR 5 Emission Totals[a]	74,603	28,078	208,375	110,835	7,231	7.4
Estimated Aircraft Net Change Emissions[b]	(12.68)	(4.02)	(0.48)	6.89	5.08	0.00
Percent Change in AQCR 5 (%)	**-0.0170**	**-0.0143**	**-0.0002**	**0.0062**	**0.0703**	**0.00**

a Summarized from the USEPA's AIRSData Source Count Inventory Report (USEPA, 2000)
b Replacement of MH-53 with 28 CV-22 aircraft as documented in the 2001 EA for the CV-22 Beddown at Hurlburt Field (USAF, 2001a)
tpy tons per year

Analysis of the data presented in Table 4.2-1 indicates that the overall ambient air quality within the Mobile-Pensacola-Panama City-Southern Mississippi Interstate AQCR 5 would be slightly affected by CV-22 beddown at Hurlburt Field. Decreases in emissions are anticipated for CO and VOCs; slightly elevated air pollutant concentrations of PM_{10}, NO_x and SO_x are also anticipated; however, the increases would be minimal (not exceeding a 0.12 percent increase for any criteria pollutant) when compared to baseline AQCR 5 emissions. The USAF and the Navy have determined that the Proposed Action's emissions would be below the applicable de minimis levels, so a conformity determination is not required for this action.

4.2.2 No Action Alternative

Under the No Action Alternative, there would not be any change in air quality within the Mobile-Pensacola-Panama City-Southern Mississippi Interstate AQCR 5.

4.2.3 Cumulative Air Impacts

A cumulative impact is defined as the impact on the environment that could result from the implementation of the Proposed Action added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor, but collectively significant, actions that take place over time. This section discusses cumulative impacts limited to airfield and airspace discussed in this analysis.

Based on currently available information, there are no direct, indirect, or cumulative air impacts associated with IOT&E, readiness training, or beddown of the CV-22 aircraft. The airspace along the MTRs and LATN areas would experience no new cumulative effects since the CV-22 is, in effect, replacing

other aircraft currently using the same routes. Pending BRAC mission changes will bring new aircraft to Eglin AFB. The currently underway EIS will analyze the impacts associated with these changes.

4.3 NOISE

Human response to noise depends on a variety of circumstances including, but not limited to, the individual's sensitivity, environment, time of day, and distance from the source. The Federal Interagency Committee on Urban Noise developed consolidated federal agency land use compatibility guidelines using yearly DNL and established the federal government's DNL 65 dB standard (USAF, 2004).

4.3.1 Proposed Action

Hurlburt Field Noise

Airfield noise is detailed in the most recent AICUZ study; the existing 65 decibel average (dBA) noise contours from aircraft activities on the Hurlburt Field flight-line have been shown as completely contained on Hurlburt or extending over water areas. Operational constraints have been established for Hurlburt Field based on these DNL contours (USAF, 2005). A figure of these contours, as published in the 2005 Hurlburt Field General Plan EA, is provided in Appendix C. The potential noise impacts at Hurlburt Field as a result of the Proposed Action will be contained, through use of operational constraints (jets are instructed to track to the west to avoid pushing noise into the community), within the 65 dBA noise contours.

Training Route Noise

Under the Proposed Action, CV-22 aircraft would be included as approved aircraft to utilize the Eglin Range Complex and established LATN and MTRs. Operating parameters, and the corresponding noise impacts to the affected environment for approved aircraft, including the CV-22, are evaluated in activity-specific NEPA documentation as described in Section 1.2.2, and are not included in the scope of this EA.

4.3.2 No Action Alternative

Under the No Action Alternative, the CV-22 would not be added to the aircraft inventory utilizing Hurlburt Field, and IOT&E activities would not be conducted. The noise impacts at Hurlburt Field would remain at current levels.

4.3.3 Cumulative Noise Impacts

A cumulative impact is defined as the impact on the environment that could result from the implementation of the Proposed Action added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor, but collectively significant, actions that take place over time. This section discusses cumulative impacts limited to airfield and airspace discussed in this analysis.

No cumulative noise impacts would be anticipated under the Proposed Action. No significant environmental noise impacts would be anticipated in terms of impacted population, dwelling units, or land areas. The introduction of the CV-22 Osprey is mitigated in great part by the departure of two flying squadrons (the 55th SOS and the 8th SOS) and the retirement of the MH-53 helicopters currently in use (USAF, 2001a). Noise impacts were discussed in more complete detail in the original EA (2001).

4.4 COASTAL ZONE MANAGEMENT

The 2001 EA for Beddown of the CV-22 at Hurlburt Field (USAF, 2001a) included construction activities necessary to prepare facilities for the aircraft. All construction activities proposed in the 2001 EA have been completed. The Proposed Action of this 5-Year Update EA does not include construction activities.

4.4.1 Proposed Action

The federal Coastal Zone Management Act of 1972 (CZMA), as amended, encourages coastal states to develop comprehensive management programs to ensure the beneficial use, protection and management of the nation's coastal resources. To encourage the adoption and implementation of the management programs, coastal states whose programs receive approval from the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), are empowered to review federal activities within or adjacent to the state's coastal zone to determine whether the activity complies with the requirements of the state's approved management program.

If an action affects any land or water use or natural resource of the coastal zone of a state with a federally approved coastal zone program, then the action must be consistent to the maximum extent practicable with the enforceable policies of the state program. Both direct and indirect effects must be considered, and it is not required that the effects be adverse.

Federal agencies are required by CZMA to provide the State of Florida with the information needed to determine whether federal actions conducted in or adjacent to the State of Florida impact the resources of the state's coastal zone, and whether impacts to the state's coastal resources are consistent with the enforceable policies contained in the Florida Coastal Management Program. Information on direct federal activities and requests for federal financial assistance must be received by the state at least 60 days prior to the initiation of the proposed federal action (15 CFR 930, Subparts C and F). Information submitted to the State of Florida for federal consistency review must be forwarded to the Florida State Clearinghouse, located within Florida's Department of Environmental Protection. The State Clearinghouse serves as the single point of contact for the receipt of documents which require federal consistency review.

The USAF and the Navy have determined that the Proposed Action is consistent to the maximum extent practicable with the Florida Coastal Management Program. A Draft of this EA was submitted to the Florida State Clearinghouse for concurrence (via a "state clearance letter") with the federal consistency determination of the Proposed Action. A copy of the Clearinghouse concurrence is provided in Appendix D.

4.4.2 No Action Alternative

Under the No Action Alternative, the proposed beddown of the CV-22 Osprey aircraft and IOT&E activities would not occur. Consequently, implementation of the No Action Alternative would not change current activities associated with approved activities at Hurlburt Field, and would not produce any new impacts to Florida's coastal zone.

4.5 WASTE AND WASTE MANAGEMENT, HAZARDOUS MATERIAL MANAGEMENT, AND STORED FUEL

The following section evaluates the impacts to solid waste management, stored fuel use, hazardous material use, and hazardous waste management, with regard to the Proposed Action and the No Action Alternative.

4.5.1 Proposed Action

With respect to hazardous materials and hazardous wastes, the CV-22 Osprey would be one of the most environmentally friendly aircraft in the current DoD aircraft inventory. Pollution prevention has been an integral part of the aircraft design (USAF, 2001a). Program contracts have required eliminating or reducing a significant number of hazardous substances used in the construction and maintenance of the aircraft (USMC, 1999). Therefore, replacement of the MH-53

with the CV-22 and performance of IOT&E activities would not increase the overall estimated use of hazardous substances associated with aircraft maintenance.

No unusual chemicals or maintenance procedures would be used as compared with the MH-53. Therefore, the beddown of the CV-22 at Hurlburt Field would not increase annual hazardous waste production. Hurlburt Field would still be considered by USEPA to be a large-quantity hazardous waste generator (USAF, 2001a).

Under the Proposed Action, hazardous materials associated with the beddown of the CV-22 aircraft at Hurlburt Field be similar to materials currently used by other aircraft at Hurlburt Field. There would be no change in the procedures used to manage hazardous materials. Safety procedures described in the Hurlburt Field Spill Prevention, Control and Countermeasures (SPCC) plan would be adhered to. Should an accidental release or spill of hazardous substances occur, procedures within the SPCC would be followed. There would be no expected net increase in solid waste generation as a result of the Proposed Action (USAF, 2001a).

4.5.2 No Action Alternative

Hurlburt Field currently accommodates other flights and training unrelated to the CV-22. Under the No Action Alternative, the proposed beddown of the CV-22 Osprey aircraft and IOT&E activities would not occur. Consequently, implementation of the No Action Alternative would not change current activities associated with approved activities at Hurlburt Field, and would not produce any new impacts to hazardous materials and waste management.

4.6 BIOLOGICAL RESOURCES

This section analyzed the potential for impacts to biological resources as a result of implementation of the Proposed Action or No Action Alternative.

4.6.1 Proposed Action

The USAF and the Navy have determined that the Proposed Action would have no effect on threatened or endangered species.

No activities are proposed that would affect the marine environment, so there will be no reasonably foreseeable “takes” of marine mammals as defined by the Marine Mammal Protection Act.

The primary direct physical impact associated with aircraft activities at Hurlburt Field is caused by bird-aircraft collisions. A "bird strike" is defined as the act of hitting one or more birds, since more than one bird may be involved in one bird strike. The 16th SOW experienced 151 bird strikes in the baseline year FY95. Many of these bird strikes actually occurred outside the 16th SOW region of influence: 72 strikes were confirmed as occurring outside the region of influence; 20 strikes were confirmed within the region of influence; the locations of the remaining 59 strikes are unknown, although some portion of each of these flights was within the region of influence. The Bird Aircraft Strike Hazard (BASH) Plan 91-212 (USAF, 2000c) established an overall bird and wildlife control program for Hurlburt Field and is designed to minimize aircraft exposure to potentially hazardous bird/wildlife strikes.

Bird-aircraft strike hazards within the region of influence at Hurlburt Field are minimized to the greatest extent possible; aircraft testing and training occur away from wildlife management areas. Under the Proposed Action, the change in airfield activities resulting from transitioning from the MH-53 to the CV-22 is not substantial. Deployment of aircraft is scheduled to begin in fiscal year 2007 (deployment of CV-22 will correspond with phase-out of MH-53 aircraft). However, full deployment of 27 aircraft will not occur until fiscal year 2017. At the end of the 10-year phase-in of CV-22 aircraft, the approximate total increase in MH-53/CV-22 sorties is 17 percent, as compared to 1999 baseline conditions (USAF, 2001a). In addition, no aspect of the Proposed Action would create or enhance locales attractive to concentrations of birds, nor would the current flight tracks at the base change; therefore no impacts to bird-strike hazards would occur as a result of the Proposed Action.

Under the Proposed Action, the change in airfield activities from the MH-53 to the CV-22 would lead to essentially no change in the amount of bird-aircraft strikes (USAF, 2005).

The potential exists for loud noises to disturb wildlife and their behavior, however, the aircraft areas at Hurlburt Field are currently in use by other aircraft and are paved and not conducive to wildlife habitat. The CV-22 Osprey produces 50.2 dB of noise compared to 48.9 dB from the MH-53. Because the increase in noise levels would be below the threshold of 65 dB threshold, and within the operational constraints established for Hurlburt Field (USAF, 2005), the noise impact to wildlife would be similar to current operational conditions.

MH-53 aircraft will be divested from AFSOC, and under the Proposed Action, would be replaced with the CV-22 aircraft. The schedule for MH-53 retirement is provided in Appendix A. Although the CV-22 generates higher downward windspeeds during takeoff and landings than the MH-53, no new impacts to

vegetation are expected on Hurlburt Field, since Aircraft areas are paved and devoid of vegetation (USAF, 2001a).

4.6.2 No Action Alternative

Hurlburt Field currently accommodates other aircraft activities and training unrelated to the CV-22. Implementation of the No Action Alternative would not change current activities associated with approved activities at Hurlburt Field and would not produce any change to current impacts to biological resources.

4.7 CULTURAL RESOURCES

4.7.1 Proposed Action

Aircraft activities associated with the Proposed Action have the potential to affect existing or potentially occurring cultural resources. While the noise and visual presence from aircraft overflights may have indirect impacts on cultural resources, the significance of such impacts is based on the integrity and characteristics of the setting. Under the Proposed Action, CV-22 activities would occur in areas already subject to military aircraft overflights and associated visual and audible impairments. The character of the environment would not be significantly impacted.

Direct impacts to cultural resources (i.e., ground disturbance) would not result from aircraft overflights. Aircraft activities on the ground would occur at the CV-22 parking area, located on the site of an existing parking area for the helicopters, which has already been disturbed. Furthermore, the parking area is located in a “Low Probability Zone” for archaeological resources (USAF, 2001c). In the event of the unlikely inadvertent discovery of cultural resources, compliance procedures are detailed in the Hurlburt Field Cultural Resources Management Plan (USAF, 2001c).

Coordination with the Florida State Historic Preservation Officer (SHPO) was documented in the 2001 EA for the Beddown of the CV-22 at Hurlburt Field (USAF, 2001a). The Florida SHPO did not anticipate impacts to cultural resources due to the Proposed Action of construction and demolition activities to prepare Hurlburt Field for beddown of up to 28 aircraft. Therefore, the Proposed Action for this EA is not anticipated to have an impact on cultural resources at Hurlburt Field.

4.7.2 No Action Alternative

Under the No Action Alternative, the proposed beddown of the CV-22 aircraft would not occur. Therefore, no new impacts would occur under the No Action Alternative.

4.8 LAND USE

4.8.1 Proposed Action

Land use impacts associated with the beddown of CV-22 aircraft was included in the Environmental Assessment prepared for implementation of the Hurlburt Field General Plan (USAF, 2005). The Proposed Action should have no effect on the off base land use in the area near Hurlburt Field. The parking facilities for the CV-22 aircraft would be located in an area designated as Aircraft Runway/Taxiway areas, approximately 0.75 miles from the eastern boundary of the base.

Sorties conducted by the CV-22s would utilize runway 18/36. Due to the prevailing winds in the area, approximately 60 percent of the CV-22 take-offs are expected to utilize runway 36, which would position the aircraft over unoccupied sections of Eglin AFB. Therefore, the aircraft activities under the Proposed Action would have no impact on land use.

4.8.2 No Action Alternative

Under the No Action Alternative, the MH-53 helicopters would not be retired; the CV-22 Osprey would not be fielded; and aircraft activities would remain the same. Therefore, there would be no impacts to off base or on base land uses under the No Action Alternative.

4.9 ENVIRONMENTAL JUSTICE/SOCIOECONOMICS

4.9.1 Proposed Action

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, was intended to ensure that Federal agencies identify and address disproportionately high and adverse human health or environmental effects of their policies, programs and activities on minority populations and low-income populations. The Proposed Action involves IOT&E, personnel training, and beddown of 27 CV-22 aircraft at Hurlburt Field. The majority of aircraft take offs, 60 percent, would be over Eglin AFB to

the north, based on prevailing wind patterns. The remaining take offs and 60 percent of the landings would occur over Santa Rosa Sound and the Gulf of Mexico to the south. Aircraft activities are constrained within acceptable noise contours that restrict air activities to the south. As a result of the noise restrictions, aircraft activities to the south are restricted to within Eglin AFB Reservation boundaries. A contour map of operation restrictions is provided in Appendix C. A census tract containing a concentration of minorities and persons living in poverty status is located near the eastern boundary of Hurlburt Field (USAF, 2005). The distance from the airstrip to the edge of the census tract is over one mile and the distance from the airstrip to the most densely populated portion of the census tract is over two miles. Therefore, the USAF and the Navy have determined that the Proposed Action would not result in any disproportionately high or adverse human health or environmental impact on minority or low-income populations.

4.9.2 No Action Alternative

Under the No Action Alternative, the proposed beddown of the CV-22 aircraft would not occur. Consequently, current operational conditions would remain unchanged. Therefore, no new impacts would occur under the No Action Alternative.

4.10 INDIRECT AND CUMULATIVE IMPACTS

CEQ regulations stipulate that the cumulative effects analysis within an EA should consider the potential environmental impacts resulting from the "incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions" (40 CFR 1508.7).

Cumulative effects are most likely to arise when a relationship or synergism exists between a Proposed Action and other actions expected to occur in a similar location or during a similar time period. Actions overlapping with or in close proximity to the Proposed Action would be expected to have more potential for a relationship than those more geographically separated. Similarly, actions that coincide in time would offer higher potential for cumulative effects.

The Proposed Action would affect the area in the vicinity of the Hurlburt Field airfield. No resource areas were found to have any measured effect resulting from the implementation of the Proposed Action. None of the projected impacts associated with the Proposed Action and No-Action alternative are significant in themselves. This finding is consistent with the 2001 EA for the Beddown of the CV-22 at Hurlburt Field (USAF, 2001a), which documented that there were no

significant direct, indirect, or cumulative impacts associated with the beddown of CV-22 at Hurlburt Field.

The Environmental Impact Analysis Process (EIAP) at Eglin AFB is in the scoping stage for an EIS to address impacts associated with mission changes resulting from the DoD Base Realignment and Closure (BRAC) initiatives. The 2005 BRAC recommendations require establishment of an initial training site for joint Air Force, Navy, and Marine Corps Joint Strike Fighter (JSF) training organizations, as well as the United Kingdom, which is a full partner in this program. The training site would teach aviators and maintenance technicians how to properly operate and maintain 107 F-35 aircraft. As part of this action, F-35 basing, facility construction and renovation, on-site maintenance and use of training airspace are being analyzed.

Direct, indirect, and cumulative impacts of aircraft operations, including CV-22 operations, will be evaluated as part of that EIS.

4.11 UNAVOIDABLE ADVERSE IMPACTS

There are no significant unavoidable adverse impacts associated with the beddown of the CV-22 aircraft at Hurlburt Field.

4.12 RELATIONSHIP BETWEEN SHORT-TERM USES AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Implementation of the Proposed Action would have a positive effect on long-term productivity by providing the DoD with effective means of quickly inserting and extracting personnel and/or sensitive equipment from hostile areas. The extraction of SOFs from behind enemy lines or contested airspace is the US Commander in Chief Special Operation Command's number one priority and a SOF capability shortfall. AFSOCs current system lacks the capability to meet the demand of missions of eight or more hours and 1,000 or more miles in range. With the beddown and deployment of the CV-22 Osprey and performance of IOT&E activities at Hurlburt Field, those demands would be met.

4.13 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

NEPA requires that environmental analyses include identification of "…any irreversible and irretrievable commitments of resources that would be involved in the Proposed Action should it be implemented." Both the Proposed Action and the No Action Alternative would require fuels used by aircraft and surface vehicles. Since flight activities and aircraft maintenance would not increase significantly relative to current activities, and the CV-22 aircraft have been

designed to improve pollution prevention, total fuel consumption would not be expected to increase significantly. Implementation of the Proposed Action would not result in the destruction of environmental resources. No wildlife habitat or cultural resources at Hurlburt Field would be lost or adversely affected as a result of implementation of the Proposed Action.

4.14 EGLIN AFB ENVIRONMENTAL CONSEQUENCES

NEPA requires mitigation measures be identified and implemented if significant adverse environmental effects are identified. The Council on Environmental Quality defines mitigation as avoidance, minimization, and reduction of impacts and compensation for unavoidable impacts (40 CFR 1508.20). A Notice of Intent to prepare an Environmental Impact Statement (EIS) for Implementation of the Base Realignment and Closure (BRAC) 2005 Decisions and Related Actions at Eglin Air Force Base (AFB), FL, was published on 28 July 2006. The 2005 BRAC recommendations require establishment of an initial training site for joint Air Force, Navy, and Marine Corps JSF training organizations, as well as the United Kingdom, which is a full partner in this program. The training site would teach aviators and maintenance technicians how to properly operate and maintain 107 F-35 aircraft. As part of this action, F-35 basing, facility construction and renovation, on-site maintenance and use of training airspace are being analyzed. The EIS may discuss potential environmental effects associated with socioeconomics, transportation, noise, cultural resources, water resources, wetlands, floodplains, air quality, land use, infrastructure, and biological resources. Due to the BRAC required mission changes that will affect airspace and training range use, the cumulative effects from CV-22 IOT&E at Eglin AFB cannot be determined at this time.

4.15 NELLIS AFB ENVIRONMENTAL CONSEQUENCES

NEPA requires mitigation measures be identified and implemented if significant adverse environmental effects are identified. The Council on Environmental Quality defines mitigation as avoidance, minimization, and reduction of impacts and compensation for unavoidable impacts (40 CFR 1508.20). IOT&E of the CV-22 at Nellis AFB will have no significant adverse impacts on the land, ranges, or facilities located within Nellis AFB. An Environmental Impact Analysis Process (AF 813) was used to determine the impacts if any, resulting from IOT&E of the CV-22. The AF 813 determined that the action could be categorically excluded based upon 32 CFR 989, A2.3.7.

SECTION 5.0
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SECTION 7.0
ACRONYM LIST

°F	Degrees Fahrenheit
AAC	Air Armament Center
ACAT	Acquisition Category
ACM	Asbestos containing material
AFB	Air Force Base
AFDTC	Air Force Development Test Center
AFI	Air Force Instruction
AFSOC	Air Force Special Operations Command
AGE	Aerospace Ground Equipment
AHPA	Archaeological and Historic Preservation Act
AICUZ	Air Installation Compatible Use Zone
AIRFA	American Indian Religious Freedom Act
AQCR	Air Quality Control Region
ARPA	Archaeological Resource Protection Act
AST	Aboveground storage tank
ATV	All Terrain Vehicles
BASH	Bird/Aircraft Strike Hazard
BRAC	Base Realignment and Closure
BX	Base Exchange
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CCCL	Coastal Construction Control Line
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CJTFEX	Combined Joint Task Force Exercise
CO	Carbon monoxide
COI	Critical operational issues
COMPTUEX	Composite Training Unit Exercise
CP	Charlie pad
CSAR	Combat Search and Rescue
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
dB	Decibel
dBA	A-weighted decibel average
DEP	Department of Environmental Protection
D_{NL}	Decibel, night level
DoD	Department of Defense

DoT	Department of Transportation
DP	Delta pad
EA	Environmental Assessment
EA/OEA	Environmental Assessment/Overseas Environmental Assessment
ECM	Electronic Countermeasures
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EO	Executive Order
ESA	Endangered Species Act
ESG	Expeditionary Strike Group
EW	Electronic Warfare
FAA	Federal Aviation Authority
FCMP	Florida Coastal Management Program
FDEP	Florida Department of Environmental Protection
FEIS	Final Environmental Impact Statement
FONPA	Finding of No Practicable Alternative
FONSI	Finding of No Significant Impact
FY	Fiscal Year
GPS	Global Positioning
HQ	Headquarters
HV-22	Navy Variant Osprey
IFR	Instrument Flight Rules
INRMP	Integrated Natural Resources Plan
IOT&E	Initial Operational Test and Evaluation
IR	Instrument Route
JAX/CHASN	Jacksonville/Charleston
LATN	Low Altitude Tactical Navigation
lbs	Pounds
LF	Landing Field
LTO	Landing Take-off
m^3	Cubic meter
µg	microgram
µg/ m^3	Microgram per cubic meter
mg	milligram
MCAS	Marine Corps Air Station
MCB	Marine Corps Base
MOA	Military Operations Area
MSL	Mean sea level
MTR	Military Training Routes
MV-22	Marine Variant Osprey
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act

NHPA	National Historic Preservation Act
NM	Nautical Miles
NO_2	Nitrogen dioxide
NO_X	Nitrogen oxides
NRHP	National Register of Historic Places
O_3	Ozone
OPAREA	Operation Area
OPEVAL	Operations Evaluation
Pb	Lead
PM_{10}	Particulate matter with an aerodynamic diameter less then or equal to 10 microns
$PM_{2.5}$	Particulate matter with an aerodynamic diameter less then or equal to 2.5 microns
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SO_2	Sulfur dioxide
SOF	Special Operations Forces
SOS	Special Operations Squadron
SOW	Special Operations Wing
SO_X	Sulfur oxides
SPCC	Spill Prevention, Control and Countermeasures
SUA	Special Use Airspace
TA	Test Area
TGO	Touch and Go
tpy	Tons per year
TSCA	Toxic Substance Control Act
U.S.	United States
USACE	United States Army Corps of Engineers
USAF	United States Air Force
USC	United States Code
USCINCSOC	United States Commander in Chief Special Operation Command
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USMC	United States Marine Corps
USSOCOM	United States Special Operations Command
UST	Underground storage tank
V-22	Osprey Aircraft
VACAPES	Virginia Capes
VFR	Visual Flight Rules
VOC	Volatile organic compound
VSTOL	Vertical/Short Takeoff and Landing

$\mu g/m^3$	Micrograms per cubic meter

APPENDIX A

MEMORANDUM FOR A-STAFF
Retirement of Air Force Special Operations Command MH-52 Aircraft

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE SPECIAL OPERATIONS COMMAND

31 JUL 2006

MEMORANDUM FOR A-STAFF

FROM: AFSOC/CC

SUBJECT: Retirement of Air Force Special Operations Command MH-53 Aircraft

1. In accordance with the USSOCOM Board of Directors FY08-13 POM direction, we are accelerating the retirement of the MH-53 fleet.

2. AFSOC will divest all MH-53 aircraft based on desired end-strength, by quarters, on the following schedule:

Breakout (M/T/B)	FY06/4	FY07/1	FY07/2	FY07/3	FY07/4	FY08/1	FY08/2	FY08/3	FY08/4
Hurlburt	15/0/2	15/0/3	15/0/3	15/0/3	15/0/3	6/0/4	6/0/4	6/0/4	6/0/4
EUCOM	5/0/1	4/0/1	4/0/1	4/0/1	4/0/1	0/0/0	0/0/0	0/0/0	0/0/0
Kirtland	0/6/2	0/5/1	0/5/1	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
Sub-Total	20/6/5	19/5/5	19/5/5	19/0/4	19/0/4	6/0/4	6/0/4	6/0/4	0/0/0
Total	31	29	29	23	23	10	10	10	10

3. The AFSOC staff will initiate program changes to meet the drawdown timeline upon receipt of this memorandum. DIRLAUTH with agencies and units affected by, or required to facilitate, this acceleration is approved.

4. My POCs for this action are Lt Col Charles Farmer, A8PF, 4-4766 or Mr. Jack Heath, A8PF, 4-3973.

MICHAEL W. WOOLEY
Lieutenant General, USAF
Commander

Note: Revised MH-53 drawdown information was provided by Mr. Purvis (HQ AFSOC/A5RX) in December 2006. Based on information that Mr. Purvis received from Force Structure personnel, the drawdown of the MH-53 at Hurlburt (PMAI/BAI) will be:

FY 07: 15/3
FY 08: 10/2
FY 09: 0/0

APPENDIX B

ADDITIONAL IOT&E INFORMATION:

List of Helicopter Landing Zones to be used during IOT&E

Landing Zones to be used for CV-22 IOT&E

Alabama

Barbara HLZ
Chuck HLZ
Karen HLZ

Florida

A-77
A-78
Barco HLZ
Big T HLZ
Boxcars HLZ
Burma HLZ
Commando HLZ
Decal HLZ
Dicey HLZ
Drone HLZ
Freak HLZ
Gator Lake AIE
Gator Lake HLZ
Samson HLZ
Sound HLZ
Tower HLZ
Tuna HLZ
Watering Head HLZ
X-ray HLZ
West HLZ
Yellow Head AIE
Charlie 52A
Charlie 52B
Sparrow HLZ

APPENDIX C

FIGURE OF HURLBURT FIELD NOISE CONTOUR OPERATIONAL CONSTRAINTS

(as published in the Hurlburt Field General Plan EA)

Figure 8 Operational Constraints

Environmental Assessment
Hurlburt Field
Hurlburt Field, Florida

Legend

- Installation Boundary
- Existing Structures
- Golf Course
- Roads
- Shoreline
- Surface Water
- Airfield Clear Zone
- IRP
- Noise Contours
- Q/D Arcs
- Env. Points of Concern

APPENDIX D

AGENCY COMMENT LETTERS

Department of Environmental Protection

Jeb Bush
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Colleen M. Castille
Secretary

December 7, 2006

Mr. Carl T. Hoffman
HQ AFSOC/A7CV
427 Cody Avenue, Suite 225
Hurlburt Field, FL 32544-5273

RE: Department of the Air Force – Draft Final 5-Year Update Environmental Assessment for CV-22 Beddown, Hurlburt Field – Okaloosa County, Florida.
SAI # FL200612062949C

Dear Mr. Hoffman:

Florida State Clearinghouse staff, pursuant to Presidential Executive Order 12372, Gubernatorial Executive Order 95-359, the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended, and the National Environmental Policy Act, 42 U.S.C. §§ 4321, 4331-4335, 4341-4347, as amended, has reviewed the referenced Draft Final 5-Year Update Environmental Assessment (EA).

Based on the information contained in the subject EA, the state has determined that the proposed federal activities are consistent with the Florida Coastal Management Program.

Thank you for the opportunity to review this proposal. Should you have any questions regarding this letter, please contact Ms. Lauren P. Milligan at (850) 245-2170.

Sincerely,

Sally B. Mann

Sally B. Mann, Director
Office of Intergovernmental Programs

SBM/lm